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TOWN HALL OF STAMFORD, CONN.

STAMFORD, CONNECTICUT

**Paving—Street Cleaning and Sprinkling—Water Supply—
Sewerage—Fire—Police—Parks—Town Hall—
Cement Sewer Pipe**

STAMFORD, CONN., is a city of about 28,000 population. While it furnishes few illustrations of municipal trading or ownership—both water and electric light are supplied by private companies—it is endeavoring to rapidly relegate to the outskirts all the crude spots and assume a metropolitan appearance and business enterprise. Considerable activity along this line was made possible by a bill which passed the last session of the Connecticut Legislature permitting the city to raise \$300,000 for public improvements, \$50,000 of which has already become available.

No paving had been done in Stamford for several years until this year, when two streets were paved and plans have been laid out for a regular paving extension covering several years. There is a little asphalt block paving on a few of the streets, but it is probable that future paving will be done with paving blocks or brick.

The streets are cleaned by hand by city employees. A machine sweeper was at one time in use, but hand sweeping was considered more satisfactory. The sprinkling of the streets is let by contract, the city furnishing the water. Nine Studebaker sprinklers are used by the contractor. Sidewalk paving is laid at the expense of the property owners and must be either flag or concrete not less than five feet wide. Owners are required to lay walks upon the order of the Council.

The city has several small parks located at street intersections and has recently purchased 80 acres on the shore

of Westcotts Bay at a cost of \$44,000, which they intend to improve, although the details have not as yet been decided upon. The streets are well shaded with trees, which are located both between the sidewalk and the street and inside the walk.

The city has no administrative building of its own, but has offices in the new Town Hall which was built by the town of Stamford at a cost of about \$150,000, and has been completed within three months. Architecturally, the building is an eminently successful one, with the exception of the bell and clock tower, which fails to bind in with the rest of the structure. The site, on two streets intersecting at an obtuse angle, permits the location of the main entrance across the angle, with well-subordinated wings extending along the streets. The Georgian detail of the façades is well-worked out and the whole effect pleasing and symmetrical. In the building are housed all the city officials, the police department and the city jail. Plans are now being made for a new school in West Stamford, to cost about \$55,000.

Street lighting is obtained by purchase from the Stamford Gas & Electric Co., which furnishes 30 arc lights in the central part of the city for \$85 each per year of 4,000 hours. The rest of the city is lighted with incandescent lamps, of not less than 20 candle power each, to the number of about 735, for which the city pays at the rate of \$20 per year of 4,000 hours. The total cost of lighting the city for the present year is \$17,690.

Water is supplied by the Stamford Water Company, to which the city pays about \$20 per hydrant, the city furnishing and installing its own hydrants. The city also paid \$1,950 last year for the use of water for the sewer flush tanks; and \$150 for the boilers in the sewage pumping plant. Water for the nine sprinkling carts cost \$300 per cart or \$2,700 for the year.

The city is sewered under a separate system. The central part of the city is quite low and the sewage therefrom could not discharge into the sound by gravity, and is, therefore, conducted to the pumping plant, where it is pumped into Westcotts Cove. An intercepting sewer of concrete and iron for the east side of the city has just been completed at considerable expense; and there is under consideration at present a plan to build a similar one for the west-side. In dry ground all sewers 15 inches in diameter and less are built of vitrified clay, while those larger than 15-inch are of concrete, egg-shape, of the bell and spigot type. Superintendent of Streets William H. Arthur states that the concrete pipes are much more free from breakage than the larger sewers of vitrified-clay pipe. Cast-iron pipe has been used in the marshes and for an outlet of about 1,000 feet into the cove. In constructing the east side sewer it was necessary to go through a considerable amount of rock in deep cut; and rather than make an open cut, which would have affected traffic and business quite seriously, the sewer was built in tunnel which cost about \$12 per running foot.

The Fire Department consists of two companies, one in the central part of the city and the other at the southern end; and it is planned to add two more as soon as

arrangements can be made to house them; it being hoped to award contracts within a few weeks for a house on the east side and another on the west. The present Department has a complete force of paid men, but it is probable that in the new houses only the drivers will be paid and the rest be volunteers.

The Police Department consists of a Chief, and about twenty men, but it is intended to add five more the first of next year and an additional five each year thereafter, until the force numbers fifty. These men are paid \$75 a month and are furnished with uniforms. They are not subject to fines and receive full pay when off duty on account of sickness. A bill was passed the first of November to pension policemen who had been on the force twenty years.

POLICE CAPTAINS AND LIEUTENANTS

By LEONHARD FELIX FULD

CAPTAINS of Police in the United States are generally appointed without passing a civil service examination, although a few of the largest cities require them to pass a civil service examination similar in almost every respect to the examination for promotion from roundsman to sergeant. Where captains are not selected according to the civil service rules they are appointed either by the chief of police or by the mayor on the recommendation of the chief of police or by the chief of police on the recommendation of the ward leader. In the historical development of the American police system the first method of appointing police captains was the method of appointment by the chief on the recommendation of the ward leader. Such a system is unqualifiedly bad, both from a theoretical and from a practical point of view. We have now reached that stage of development where we regard all political considerations as improper means of influencing appointments and neither in the police department nor in any other branch of the government do our statutes to-day provide for appointments upon the recommendation of a ward leader. In the small and the medium-sized cities the appointment of captains by the chief is undoubtedly a very good method of selection. The chief, if he is an honest and efficient officer, knows better than any one else can whether a man has the qualifications requisite for the making of a good captain. If the chief is either dishonest or inefficient, the requirement that appointments to this position must be approved by the mayor, or as it is generally stated, should be made by the mayor on the recommendation of the chief, will not help matters very much. The mayor cannot ordinarily spare the time to investigate the character and record of candidates with any great care, and even if he should do so he cannot be expected to have even as much expert knowledge of the police business as the least efficient chief of police is bound to have. If political considerations would be likely to influence the chief in making appointments, the fact that the mayor is generally of the same political faith and that in the nature of things appointments of police captains when made by the mayor are more or less matters of routine, shows clearly that

the action of the mayor does not generally serve to check improper action by the chief of police in the appointment of captains.

The method of selecting captains at present in use in the largest cities is undoubtedly the best, at least from a scientific point of view. Candidates for appointment are required to pass a civil service examination and are then placed upon an eligible list in the order of the percentages received by them on their examinations. The civil service examination inquires not only into their mental ability, physical fitness and previous police record, but also gives credit for seniority of service, on the principle that if other things are equal the man who has served longest on the police force and has most experience is best qualified to perform the duties of captain. The names on the eligible list are certified to the non-professional head of the police department for appointment in the order of their standing on the eligible list, three names being certified for each existing vacancy. From this description this system of selection seems to be almost perfect; it removes the process of selection from all political and baser considerations and yet gives the appointing officer a wide discretion which he can use so as to avoid appointing inefficient men whose names may have been placed on the eligible list. Yet the fact remains that in a few of our largest cities where this system is in force, whether the police commissioner is honest or the reverse, scarcely a man is appointed to the position of captain who does not either possess strong political backing or is willing to pay for his promotion, or has both of these qualifications. This is one of the mysteries of police administration in the United States.

The general character of police captains in the United States compares very favorably with the character of corresponding officers in the principal European nations. What the American police captains lack in educational qualifications of the kind obtained by attendance at school or college they have generally gained by experience. They are men of robust constitution, good physical development, experienced in the police business, and possess executive ability of a high order. They are keen judges of men and quick to get at the gist of matters brought to their attention. The police business, with its intimate and constant contact with the dregs of society is not ordinarily conducive to the promotion of the moral character of the police officer, but the careful observer of American police conditions will find that there are not more disreputable or immoral captains of police in America than there are men of similar character in any other walk of life. It is undoubtedly true that a few, a very few, men who were scoundrels have worn the uniform of captain of police in some of our American cities, but their number has been exceedingly small, and the present tendency within the police department, as well as outside, is quickly to get rid of such men. Complaints of blackmail on the part of captains are sometimes heard. In a few cases the captain may possibly resort to blackmail to increase his income or reimburse himself generously for the expenditure which he was required to make to secure his appointment, but such cases are of such infre-

quent occurrence as to be almost a negligible quantity. Where police captains levy blackmail—and there is hardly an American city in which they have not at one time or another levied blackmail to a greater or lesser extent—they do not levy it of their own volition, but rather at the command of a superior officer. If a single captain would attempt systematically to levy blackmail he would be sure to excite the envy of his superior officers, even if the moral impropriety of his conduct did not shock his superiors. Hence, where blackmail is levied by police captains to any appreciable extent, the captain is merely the collecting agent of a system of blackmail. For his services in this connection, it is true, he receives a share of the proceeds, which he accepts not unwillingly, partly because a refusal to do so would arouse suspicion and quickly lead to the end of his police career, and partly because he justifies himself by saying that what his superiors do he may do without compunction. While this philosophy may well be criticised from the point of view of sound morality, it is a fallacious justification in which many men of a higher social standing than police captains frequently indulge. The whole subject of blackmail is very intimately connected with the administration of the laws relating to vice, gambling and the liquor traffic.

In Boston, St. Louis, Baltimore, and a few other cities, the need of a commanding officer of police in each precinct at all hours of the day and night has been so acutely felt that provision has been made for a lieutenant of police. Such lieutenants of police exercise all the powers and discharge all the duties of captains in the event of the sickness or absence of the latter from their respective station-houses and at all other times they act as assistants to the captains. When in command of the precinct the lieutenant must naturally be careful not to interfere with or countermand, unless absolutely necessary, any orders previously made by the captain. In St. Louis the captains are generally in command at the station-houses during the day and the lieutenants during the night; in Boston captains and lieutenants alternate in performing day and night service. If every company of soldiers in the army requires a lieutenant who can assist the captain and take the captain's place in case of the latter's disability or absence, every important police precinct has certainly as great need or even greater need of a lieutenant or assistant captain. The sergeants in an important precinct are kept quite busy by their own duties and have little spare time to devote to the performance of the duties of commanding officer. But aside from this, the absence of a commanding officer from his precinct and the knowledge that there is no lieutenant taking his place has an important effect both upon the patrolmen and the roundsmen of the precinct and upon the professional criminals operating in the district. The former shirk their work and let matters drift and the latter are quick to take advantage of the opportunity thus afforded them. This state of affairs is so well known in New York that when the captain of the most important precinct in New York is granted a twelve-hour leave newspaper reporters flock to the station-house, confident that important news will soon be forthcoming. And they are seldom disappointed.

SEWAGE PUMPING MACHINERY

Gasoline Plant at Newton, Mass.—Electric Plants at Saratoga, N. Y., Hudson, Waltham and Pittsfield, Mass., and Fredericton, N. B.—Cost—Efficiency—Auto-starters

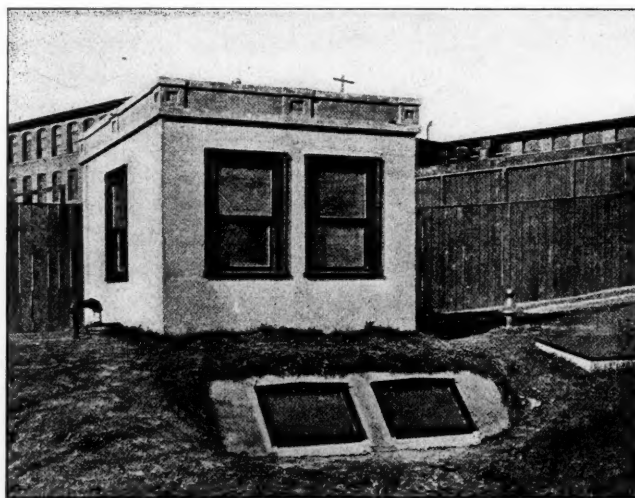
MEMBERS of the Boston Society of Civil Engineers some months ago discussed a paper by Irvin T. Farnham, descriptive of the Sewage Pumping Plant at Newton, Mass., and this paper and the discussion of it contain so much interesting matter that, although it was briefly referred to by us at that time, it seems worthy of a rather full abstract. For the illustrations we are indebted to the *Journal of the Association of Engineering Societies*.

"The necessity of reaching elevations sufficient for the installation of disposal plants," said Frank A. Barbour, "or the economy of treating a system of interception sectionally, either because of intervening high land or a territory too flat to permit of good gradients, often leads to the use of pumps in sewerage works. In all cases the necessity for pumping must be proved, particularly to the local authorities, who have a well grounded aversion to the adoption of anything but a gravity outflow. At the same time, it is generally advisable to pump if a better soil can be obtained for filtration, even though a fairly workable field may be reached by gravity. It also frequently pays to pump the entire sewage when a portion in any case has to be handled, though a large part of the town may possibly be intercepted by gravity." Steam pumping, he says, requires an attendant at each station and storage capacity to permit intermittent pumping. The Shone system avoids these objections, but is applicable to a limited zone of distribution and is uneconomical. The necessity for storage is avoided by having a number of units which are automatically put into and out of service as the amount to be pumped varies; for which electric power is apparently the best adapted.

In the Newton plant "the sewage is discharged into a circular concrete well 18 feet in diameter and 6 feet deep, which is divided diametrically into two chambers by a vertical partition provided with a gate. By stop planks the sewage may be diverted into either section, thus allowing the cleaning of one section or repairs to the pump while sewage is discharging into the other. The sewage, before entering the well, passes through basket screens of wire woven one-inch mesh.

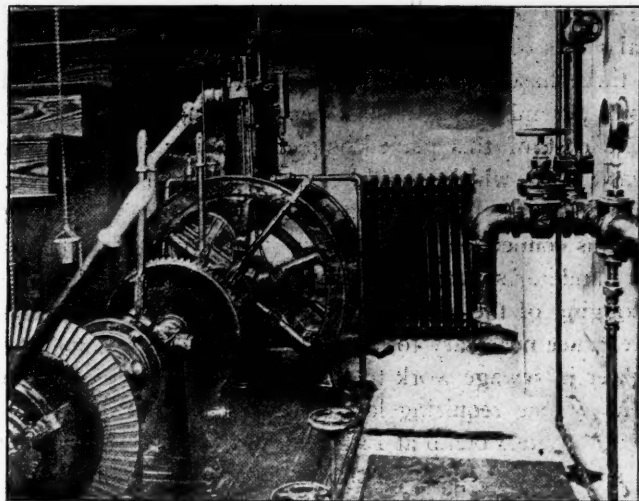
"Above the pump well, but below the surface of the ground, was constructed the engine chamber, 9x17 feet inside measurement, and above the ground is a concrete house, 9x11 feet inside measurements, which provides light and ventilation and affords an entrance into the engine chamber. The pumping machinery is in duplicate and consists of two 3½-inch submerged centrifugal pumps mounted on vertical axes and operated by two 6-horsepower vertical gasoline engines which are connected with a horizontal shaft geared by double gears on the vertical shafts of the pumps. By means of fric-

tion clutches on the engine shaft either engine can be used to operate either pump, both engines to operate one pump or both pumps running together. This provides great flexibility of operation and has prevented any delays in pumping when either pump or engine has needed repair or is otherwise out of service. The pumps discharge the sewage through a 6-inch iron force main 1,430 feet long with a maximum lift of 30.7 feet. A check valve upon the discharge pipe prevents the back flow of sewage from the force main into the well after the pumps are stopped." The contract required the pumps to deliver 150 gallons per minute; but tests made after they had been in operation a short time showed a discharge of 210 gallons per minute, and the pumps are exceeding the rated capacity in their daily work.



SEWAGE PUMPING STATION, NEWTON, MASS.

The plant is near the water works pumping station, one of whose firemen visits the plant two or three times daily. A Winslow recording gauge in the pumping station indicates the height of sewage in the pump well and also keeps a record of the amount pumped. One disadvantage of gasoline engines is that they cannot be made to start themselves automatically; and although, when the sewage in the pump well falls below a certain level an automatic float cuts off the electric igniter and stops the engine, the attendant must start the pump again when the sewage has risen to a given height. As might be expected, carelessness has sometimes led to a delay in starting the pump, and in two or three cases sewage rose above the level of the floor before the pumps were started. One of the laborers from the sewer flushing gang goes to the plant one day each week, cleans out the screens, flushes the sludge by means of brushes to the center of the pump well so that it may be pumped through the main, and gives the plant a general slicking up.



SEWAGE PUMPING MACHINERY, NEWTON, MASS.

During the years 1905 and 1906 the plant handled an average of 25,565 gallons daily; the maximum for any one day being 53,700 gallons.

The cost of the plant was as follows:

For sewage well and pumping station.....	\$2,400
For construction of force main and connections....	2,100
For installation of machinery	2,200
	<hr/> \$6,700

The average yearly cost of operation for the three years 1904, 1905 and 1906 has been as follows:

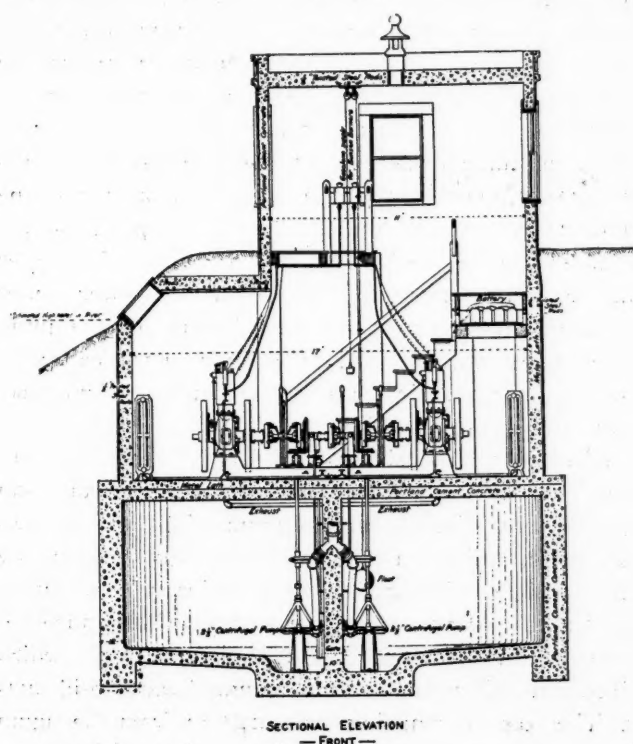
Labor and attendance	\$108.50
Gasoline	145.85
Maintenance and repair of plant.....	66.00
Oil, batteries and other supplies.....	85.87
	<hr/> \$406.22

The fuel used was gasoline, 72° test, the average cost of which was 16 cents per gallon. The average amount

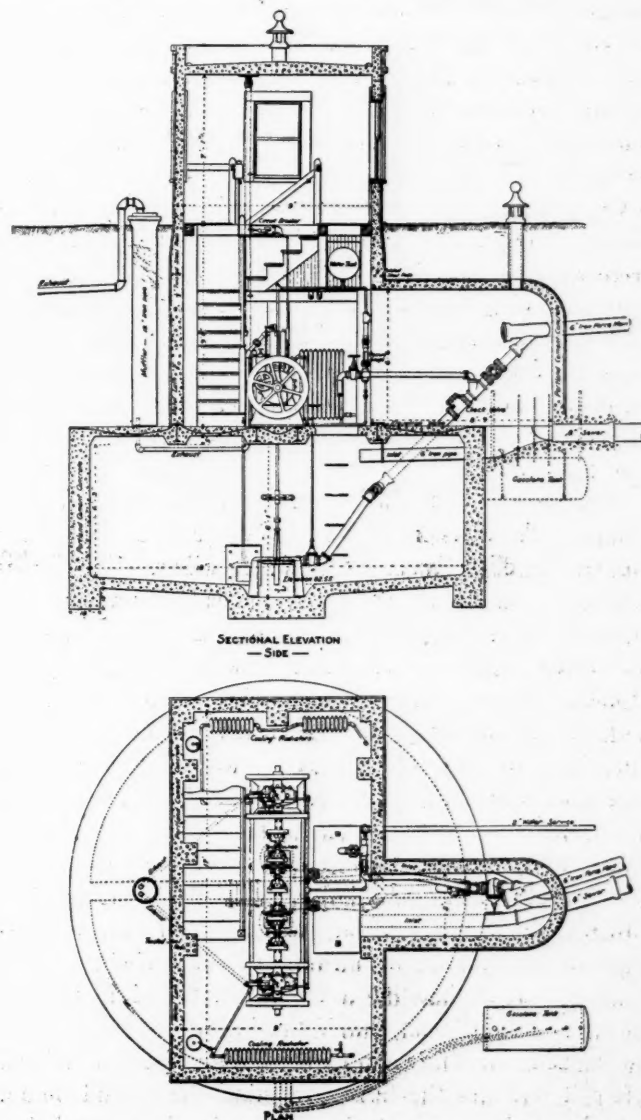
consumed per year was 1,168 gallons. The number of gallons of water raised one foot per gallon of gasoline was 229,686. The cost of pumping figured on station expenses was \$1.35 per million gallons raised one foot; the cost of fuel was 58 cents, or 15.5 cents per effective horsepower developed by the pumps. Assuming an efficiency of 33 1-3 per cent. for the pumps, this gives a cost of 5.11 cents per horsepower developed by the engine.

At first no screens were used and the pumps readily threw out everything which came to them except cotton waste from a large machine plant which uses the sewers; this waste knotting up and collecting around the suction pipe and then, when finally drawn in, completely stopping the discharge. Another trouble was caused by fine sand from the machine works foundry, which would be carried up through one pump and, at the Siamese junction of the two discharge pipes, would settle back through the other discharge pipe into the other pump, where it would cake so hard as to prevent the working of this. This was overcome by occasionally flushing water back through the pumps with the pressure of the water main.

Mr. Barbour described several electric plants. One at Saratoga, N. Y., consists of three units of induction



VERTICAL SECTION, NEWTON PUMPING STATION



PLAN AND VERTICAL SECTION, NEWTON PUMPING STATION

motors of 20 horsepower each, direct-connected by vertical shafts to three 6-inch centrifugal submerged pumps, each in a separate well, with floats in the wells so arranged as to start and stop the motors by the rise and fall of the sewage. The capacity of each unit is 1,500 gallons per minute with one pump working against a head of 28 feet; 1,200 gallons per minute with two pumps working against a head of 38 feet; 1,000 gallons per minute with all three pumps working against a head of 42 feet. (The additional head when two and three pumps are working is caused by the added friction in the pumping main due to the increased quantity delivered.) The combined efficiency of pumps and motors was found by test to be about 35 per cent. The capacity of pump well is 10,000 gallons, or only sufficient to balance the operation of the machinery. The amount of sewage handled direct varies from 1,500,000 to 3,000,000 gallons. The cost of the plant was \$5,400, including pumps, motors, automatic starting apparatus, and all interior piping and valves.

At Hudson, Mass., two 15-horsepower induction motors, using a three-phase current of 60-cycle frequency, direct-connected by vertical shafts to 5-inch centrifugal pumps, serve to lift the sewage to an elevation of the disposal plant against a total head of 35 feet. The current is obtained from the municipal electric plant at a primary voltage of 1,080, which is stepped down by static transformers to 500 volts at the motors. The pumps in this case are set in dry wells at an elevation below the height to which the liquid rises in the adjoining sewage well, with suctions laid through the concrete dividing well into this collecting well, the pumps therefore being dry and accessible but ready primed with each rise of sewage in the collecting well. The normal capacity of the pumps is 500 gallons, and the guaranteed combined efficiency of 42 per cent. was slightly exceeded in the test. The cost of this plant, complete as above, was \$3,600.

Wherever vertical shafts are used, Mr. Barbour recommends the division of the moving parts of the motor and the impeller thrust by a slip coupling. The thrust bearing at Saratoga was several inches in diameter, with alternate loose rings of brass and steel submerged in oil, which caused considerable trouble by heating; at Hudson, however, a regular marine propeller-bearing, with an oil-collecting pan, the oil being lifted and circulated by centrifugal force, as is done in motor work, was used with entire success. When the pumps are in dry wells, as in Hudson, particular care is necessary to obtain a tight pump casing to prevent the entrance of air. In both plants time limit relays have been installed, which automatically cut out the current in case of stoppage of the motors or burning of the switches. The floats are so set that the first pump starts with the sewage at a certain level, and if the inflow is greater than the capacity of this pump the sewage rises to a level where it operates the float governing the second pump.

At Fredericton, N. B., is an electric plant, consisting

of two 15-horsepower motors, direct-connected by vertical shafts to two 5-inch centrifugal pumps, which utilizes a three-phase alternating current, and discharges 500 gallons per minute against a head varying up to 20 feet. The cost of this plant complete, similar to the above, was \$4,000, which would be equivalent to about \$3,000 in this country. The guaranteed efficiency was 52 per cent. In this connection Mr. Barbour stated that high efficiency in handling sewage sometimes increases the tendency to clogging of the pumps because of the decreased impeller clearance necessary to this efficiency, and it is sometimes better in sewage work to adopt a pump with lower economy or one requiring less screening of the sewage.

An electric pump at Pittsfield, Mass., was described by F. H. Hayes. This is a triplex, horizontal, double-acting piston pump handling 3,500 gallons per minute against a 60-foot head. Clapper valves allow free passage of the sewage. It was originally double-gear, the inter-gearing having wood teeth, but was very noisy and the inter-gears rapidly went to pieces; in consequence of which it was changed to a belt-drive. Mr. Hayes, who is a pump manufacturer, advises the visiting of an electric pumping plant as often as every three or four hours, although he states that some of their pumps are allowed to run all night without anyone to look after them.

At Waltham, Mass., is an electrically-driven vertical motor and vertical pump lifting sewage against a head of 40 feet, and consisting of two units each containing a 5-inch pump and a 15-horsepower motor, run by alternating current. This was referred to by Bertram Brewer, who also stated it as his opinion that pumps should be placed below the sewage level, but in a dry well, with the entrance to the suction pipe, which should be very short, so located that all the harder materials will be frequently stirred up and constantly removed. In the Hudson plant the pumps so located have been purposely submerged in water because of the difficulty in getting the stuffing boxes tight. He stated that he had found it difficult to get a reliable automatic starting device for an alternating current motor. He had investigated three--the Westinghouse Starter, the Cutler Hammer, and one manufactured by the General Electric Company, the last of these being in use in the Hudson plant. The Cutler Hammer auto-starter requires the use of water under pressure from the city mains, necessitating that the pump house be kept warm in winter; which is demanded by the others also, because in these the mechanism is immersed in oil, which congeals with cold.

Reliability was considered by C. O. Rogers as being more important in a small sewage-pumping plant than high efficiency, since failure to pump might lead to serious results, while the additional cost involved by low duty would be quite small. High efficiency in a centrifugal pump requires a minimum amount of clearance between the impeller and the shell surrounding it, which reduces the ability of the pump to pass heavy, solid matter. The cost of removing such matters from the pump might easily exceed any saving due to high efficiency.

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NOVEMBER 27, 1907.

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Paving Selection and Assessment

A NEWS item concerning York, Pa., in the News of the Municipalities column of the MUNICIPAL JOURNAL AND ENGINEER for November 20, states that the property owners on Market street are considering paving this with asphalt, but "in case any owners refuse to sign (the agreement), the repaving will go on, but no paving will be done in front of the properties of the dissenting citizens." It seems hardly credible that asphalt paving would actually be constructed in non-continuous sections along a street, alternating with macadam or some other entirely different paving in stretches only 30 to 50 feet long, and yet this is but the logical result of carrying to an extreme the general idea, so common in most cities, that the citizen on a given street should decide what class of paving is to be placed thereon. In many cities a given class of paving extends for only two or three blocks, where it changes to another class; and streets in the same neighborhood and under perfectly identical conditions as to grade, traffic, etc., are paved with totally different materials. In our opinion the entire idea is a mistaken one and, as we have

stated before, the citizen should no more decide what kind of paving should go in front of his house than what size of sewer or water main. The streets are for the use of the entire city and not for him alone, and a decision as to the class of pavement should be made by one who has in mind the interest of the entire city and not of any one or one dozen residents therein. As a corollary to this idea of permitting no choice is the other, that the private citizens should not be required to pay for an unusually durable or otherwise expensive pavement which is called for by general traffic or other public use. In other words, as we stated in a previous editorial, we believe the only fair way to assess pavement costs is to base the assessment rate upon the cost of the cheapest class of pavement which is considered desirable for the city in question, and pay all excess costs out of the public treasury, because such excess is called for by the demands of the general public. These seem to us the only scientific methods of selecting and paying for pavements. There can be little question that, if the class of paving for each district is selected by an expert, the general effect, both as to appearance and traffic, would be much improved and the cost of maintenance would be lessened.

Investigations by Non-Experts

AN illustration of one of the objections to trusting the investigation of a municipal utility to one who is not an expert on the subject, however well informed he may be along other lines, is given by the reports cabled from Paris of statements made by the Chief Engineer of the Bridge Department of New York City, who is said to have been sent to Europe by the Mayor to study street paving. According to these reports, this engineer stated "If the American asphalt companies force up the price, the City of New York may invite competition by using wood pavements as the French do. New York has an abundant supply of southern pine near at hand which would make a better pavement than the French now possess." This investigator of street pavements is apparently unaware of the fact that New York already has many miles of wood block pavement—more than any other city in the country. His reference to the "abundant supply of southern pine" for paving purposes must be made in ignorance of the fact that such pine suitable for paving purposes is nearly exhausted, or has reached such a price that the paving companies are conducting costly experiments to ascertain whether other woods cannot be made to serve the purpose equally well. If it is really the case that this gentleman is expected to render a report and recommendations for street paving of New York City upon his return, we cannot prophesy, in view of the above, any great value for the same. If this is the case where the investigator is an engineer, what can be expected of reports made by investigating committees composed of merchants and other citizens with no engineering knowledge, who are sent on junketing trips with the idea of determining what kind of pavement, of garbage disposal plant, or other public utility the city should adopt.

Municipal Markets in Cleveland

THE office of Market Clerk in Cleveland, O., was created in 1839, his duty being to attend to the market houses, weighing, the conditions under which meat was sold, etc. Since then the city has continuously maintained a public market. At first the grounds and building were rented by the city, but in 1840 a market house was built, and another in 1867, and in 1880 the city had four markets, occupying a total area of a little less than two acres. At present only the poorer classes patronize the municipal market house, owing chiefly to the use made of telephone service and free delivery by the other classes. The receipts consist of the rents paid by tenants for use of stalls, benches, curbs, etc., and the fees received by the keeper of the city scales. Stalls were formerly assigned by public bidding, but under the new municipal code the Board of Public Service makes the assignments and fixes the rents to be paid. The chief items of expenditure are the salaries of officers and employees, including the City Sealer, and fuel and light for the market buildings.

An act of 1898 authorized the city to issue \$325,000 of bonds for purchasing land and erecting a market house and auditorium, and a Market House Commission of three members was provided for and was appointed by the Mayor in 1901. In 1903, however, the law by which the commission was created was declared unconstitutional and its duties devolved upon the Board of Public Service. Previous to this \$160,000 worth of bonds had been issued and expended for the purchase of land. Construction of the building has been delayed in various ways, however, and it is probable that the auditorium feature will be omitted.

The receipts from the markets varied from \$32,279 to \$48,635 between 1890 and 1900; were but \$27,605 in 1901, but increased to \$35,986 in 1905. The expenses between 1890 and 1900 varied from \$17,340 to \$25,980, and from \$20,707 to \$22,986 between 1901 and 1905.

Street Paving in St. Louis

PREVIOUS to 1901 the pavements found in most of the residential streets of St. Louis, Mo., were of Telford macadam, and in the business section of granite block. Since 1901, however, the Board of Public Improvements has not recommended the use of Telford or macadam pavements on account of the expense of maintenance. At the present time, granite blocks are used in the business section where there is much heavy hauling, while in the retail district both the Board and the citizens favor smooth pavements such as asphalt, bitulithic and creosoted wood block. In the residential sections these same smooth pavements and also vitrified brick are used. The recent costs of the various kinds of paving have been as follows:

Asphalt	\$1.60 to \$2.00 per square yard
Bitulithic	\$2.25 per square yard
Vitrified brick	\$1.70 to \$1.80 per square yard
Wood block	\$3.25 per square yard
Granite block	\$2.75 per square yard

Asphalt and bitulithic pavements are laid on a five-inch concrete foundation, while vitrified brick, wood block

and granite block are laid on a six-inch concrete foundation. In the above figures the cost of these foundations is included. All of these prices are based on a five-year guarantee.

Six-inch granite curbing is used, backed with concrete, and costing 90 cents per lineal foot, which includes six inches of concrete under and behind the curb.

The paving is paid for by property owners by a special tax, the city not paying for the intersections; its contribution to the cost being limited to its proportion on city real estate. One-quarter of the cost of paving is assessed against property fronting or adjoining the street improved; three-quarters of the cost is assessed against a district defined by drawing a line midway between the street to be improved and the next parallel or converging street. Altogether the city pays about \$100,000 a year as its share of the paving expenses. At the present time St. Louis has 45.42 miles of asphalt, 24.46 of bitulithic, 96.19 of vitrified brick, 63.48 of granite block, 2.50 of wood block and 290.32 of Telford and macadam; a total of 522.37 miles. During 1906 it laid 3.53 miles of asphalt, 3.35 of bitulithic, 15.74 of vitrified brick and 0.18 of granite block; a total of 22.80 miles, costing \$1,056,640.

The city contracts annually for sprinkling more than 500 miles of streets, the cost thereof being charged as a special tax. The rate per front foot averages about four cents.

Indirect Advantage of Municipal Ownership

IN South Norwalk, Conn., the city owns its own electric lighting plant. It would seem as if the city would buy its coal direct from the mines and thus not give the middleman a profit, but the city has found out that coal can be bought of a local dealer at only ten cents more than it would cost at the mine, and the dealer has to store it and take all the worry in regard to it. Formerly this dealer had a steam engine to take the coal from his barges, but now he pays the city 5 cents per 1,000 watts for power to run an electric motor and finds that he can save money by it, and he and the city are both happy.

This cheap power which the city furnishes at from 5 cents to 3 cents per 1,000 watts and makes a good profit on, has attracted many manufactories to the city and a number of the new buildings are designed without any provision for steam power. A notable example of this is an English silk concern which chose South Norwalk as the cheapest place in which to manufacture its product and put up a modern concrete building designed to use only electric power.

Another example of how economical this power is, comes from the experience of a planing mill man who used to burn his shavings under his boilers with a little coal. He discovered that it would pay him to install electric motors and discharge two men who looked after his steam plant. The money he saved on these men's salaries and that which he took in from the sale of his shavings made the change a profitable one; although it might not be profitable where power costs more.

NEWS OF THE MUNICIPALITIES

Divers Subjects of General Interest and Their Treatment by City Councils and Officials—Streets, Water Works, Lighting and Sanitary Matters—Police and Fire Items—Government and Finance

Roads and Pavements

ATLANTIC CITY, N. J.—Atlantic avenue has already been paved throughout the greater part of its length in the city, and the contractors have promised it will be entirely completed by December 6. It is paved with bitulithic material, and, while it has been down only a short time, it is giving unusual satisfaction. The Business Men's League has succeeded in inducing merchants along the thoroughfare to remove the unsightly awnings that have stood in front of many business places, and this gives the sidewalks a clean appearance and adds materially to the beauty of the street.

NEW YORK, N. Y.—The report of Chief Engineer Nelson P. Lewis relative to providing outlets for Sixth and Seventh avenues, has been presented to the Board of Estimate and Apportionment. Three propositions were considered at length, each having in view the same result, *i.e.*, the discontinuance of the pockets which now exist at the southerly ends of the streets named, to be accomplished by laying out extensions of these thoroughfares leading to and connecting with other important arteries of travel. The suggestions were made in a petition of property owners, the plan submitted by the City Improvement Commission, and the plan of the Municipal Art Society. The property owners allege that the extension and widening of the streets named in their petition would create two new and shorter routes between the upper and lower parts of the city, and the improvements of the Pennsylvania Railroad will make a new and larger demand for surface car accommodations. They assert that the cost of the changes proposed by them would not exceed \$3,000,000. A fourth plan has been prepared, intended to include those features of the plans submitted which are deemed most advantageous, and to exclude changes which, by reason of undue cost, might prove unnecessarily prejudicial to a favorable consideration.

NIAGARA FALLS, N. Y.—The Grade Crossings Commission has received the report of the special committee appointed to consider the advisability of engaging engineering experts to assist in the plans to eliminate grade crossings. The action of the committee in engaging John L. Harper, Chief Engineer of the Niagara Falls Hydraulic Power and Manufacturing Company, and William D. Robbins, formerly of the Canadian Niagara Power Company, was approved. Both Mr. Harper and Mr. Robbins will undertake the work at a nominal fee and they will draft plans at once of the various grade crossings to be abolished, showing the nature of the proposed improvement. The New York Central will cooperate in eliminating the danger trap on N. Main street.

SPRINGFIELD, O.—Probate Judge Frank Geiger, in part of his address to the Springfield Florists' Club, pointed out what he called the miserable defects in street paving and sidewalks. He said he understood that Springfield had fewer paved streets than any other city of the same size in Ohio, and that in laying new street paving the city has heretofore paid but one-fiftieth of the cost, in addition to the street intersections. The judge called attention in detail to the deplorable condition of certain streets and sidewalks, the wrongful practice of allowing public service corporations to tear up the paved streets whenever they wish, the erection of wooden poles in the business district and other more minute improvements.

Sewerage and Sanitation

ALLENTOWN, PA.—The city Board of Health contemplates supplementing the work of the State in the inspection of meat slaughtered in Allentown. Brief reports of their inspection here, made by Dr. Louis A. Klein, Deputy State Veterinarian, and Dr. O. G. Noack, an agent of the Board in the meat hygiene service, show that out of forty-seven meat markets and slaughter-houses visited, unsanitary and dangerous conditions existed in fifteen; cattle affected with tuberculosis were found either slaughtered or ready to be slaughtered; that much unhealthful meat is put on the market was attributed by the inspectors, not to the dishonesty of the butchers, but to their ignorance of pathological conditions, and the necessity of there being a trained man, not a butcher, who of course knows the quality of meat, but a pathologist, who understands diseased conditions in cattle, was pointed out.

BALTIMORE, MD.—There have been numerous complaints recently in regard to the smoke evil, and David Stewart, Chairman of the Anti-Smoke League, cites numerous buildings as being responsible for the nuisance. Under the existing anti-smoke ordinance, a large number of complaints have been laid before the Grand Jury, but that body did not think the evidence given by the employee of the Anti-Smoke League was sufficiently clear to base an indictment upon, and dismissed the cases. Other complaints brought before police magistrates met with a similar fate. Mr. Stewart says the anti-smoke ordinance, being perfectly valid, should be enforced, and if the individual members of the community will keep up their interest and make complaints he believes that much of the existing evil can be abolished.

SALT LAKE CITY, UTAH.—The reports to the Department of Health for October and the first weeks in November showed no abatement in the number of contagious diseases. The report of the Department for October showed that there were twenty-two cases of typhoid in each of the two western municipal wards, the Second and Third, as against ten each in the First and the Fourth, and nine in the Fifth. The spread of diseases throughout the city has attracted attention in medical circles, and the Health Department officials say that if all the cases were reported that the number would be materially increased, especially typhoid fever and measles. As yet all efforts to trace the cause of the typhoid have been in vain. Some attribute it to bacteria in the water, while others say that infected milk is the cause. Because of the prevalence of the disease all over the city, no definite reason can be given, as it seems to be a general and not a local trouble.

SAN ANTONIO, TEX.—Vegetables, fruits, meat, fish and game in large amounts have recently been condemned in the city by the inspectors; the meat inspector stated that a few San Antonio butchers are probably slaughtering diseased animals, but that so many kill their cattle out of the city that he had no chance to make inspections. Action is also contemplated toward the betterment of the dairies, which are to be investigated in connection with the proposed amendments to the milk ordinances.

SHEBOYGAN, WIS.—That the constant existence of typhoid fever cases in Sheboygan is due to pollution of the city water by sewage, was the opinion expressed by Dr. W. H. Winchester in an address before the Woman's Club of this city. He stated that the water works intake

pipe should be extended. Dr. Winchester also argued for a cleaner and more careful handling of milk.

WASHINGTON, D. C.—The finishing work on the new trunk sewer at the point on the Potomac near the Naval Magazine, about three miles south of the city, where the land pipes of the big sewer from this city and those running out into the bed of the river connect, is now about completed. It is stated that only some grading work over the sewer pipes and some minor jobs remain to be done. The pile-driver and other floating machines which have been working at the sewer outlet for two years or longer have completed their part of the job, and left the outlet three weeks or longer ago, and the digging and hoisting machines which were employed on the land work are also being taken away. Water is running through an opening to one side of the concrete work on the river shore at the sewer, but it is said that the pipes below the surface of the river are not yet in use. When they are used the sewage from the city will be discharged at the bottom of the channel, which at the outlet point is about thirty feet deep.

Water Works

BALTIMORE, MD.—The income from water rents of the city's Water Department will be less next year by nearly a quarter of a million dollars. Figures compiled showing the financial side of the city's water supply system and the exact difference between the income of the Water Department and the outgo next year, taken from the ordinance of estimates, shows that the loss to the taxpayers on this Department will be \$243,500 in round figures. The estimated income from water rates will be \$1,025,000. The various appropriations for the Water Department are as follows:

Cost of collection of water rents.....	\$32,075
Interest on water loans	397,220
Water-loan sinking funds.....	15,750
Water Department salaries	90,220
Water Department expenses, construction, maintenance, etc.	608,300
Mount Royal pumping station repairs	100,000
Dredging Loch Raven	25,000
Total	\$1,268,565

Subtracting the income from the estimated expense gives a deficit of \$243,565, which has to be made up from the tax levy. The deficit this year was about \$40,000. In view of the fact that the Water Department will be such a heavy expense to the tax-payers next year, there is some talk at the City Hall of making a slight raise in the water rates.

NEW YORK, N. Y.—Mayor McClellan recently directed the Commissioners of Accounts to make a public investigation of the action of the Board of Water Supply in letting the contract for the construction of the main dams for the Ashokan Reservoir to other than the lowest bidder. In a report submitted to the Mayor by the Commissioners it is stated that the Board of Water Supply had not accepted the bid of the John Pierce Company because, in the opinion of Chief Engineer J. Waldo Smith, the bid was not of an amount sufficient to allow the contractor profit upon the work; that to compel the contractor to proceed with the work at a loss, would, through probable consequent delays and disputes, result in greater ultimate loss and harm to the city than an award to the next lowest bidder at an advance of \$2,354,425. The experts employed by the Commissioners of Accounts made a personal inspection of the site of the Ashokan dam, and reported their conclusion that the Pierce Company could do the work satisfactorily at the bid submitted and still have made a reasonable profit, and it is also held that the bid of McArthur & Winston, to whom was awarded the contract, was excessive.

OAKLAND, CAL.—The establishment of a Greater Water Supply Department, under Constructing Engineer L. D. Adams, means that the People's Water Company is carrying out elaborate plans for the development of water sources to supply Oakland, Alameda and Berkeley of far greater consequence than the company has yet been willing to admit. The operation in running a tunnel from Cull Canyon, north of Hayward, to divert water from the canyon stream into Lake Chabot, is but a small part of the great project to enlarge the system to meet the demands of a growing population on the east side of the bay.

PITTSBURG, PA.—As soon as possible after the filtration plant has been put into operation to its full capacity, water meters will be installed in all homes and business houses in the city. Officials of the Bureau of Water claim that millions of gallons of water are wasted in Pittsburgh every day because of carelessness in closing spigots, allowing lines of hose to run for hours and similar things. It is claimed that with water meters installed and every consumer having to pay a certain sum per 1,000 gallons for his water, waste will cease and that the city will not use more than 75,000,000 gallons per day, even with the South Side added. If the amount of water used can be held down to that amount daily, the city will be saved thousands of dollars every year in filtration, maintenance and pumping expenses.

READING, PA.—The city having voted to make a loan of \$500,000 to filter its water supply, the State Board of Health has taken cognizance of the condition of the sources of its water supply, and Commissioner Dixon has written that he will send a force of five inspectors to examine the streams whose waters are not furnished to residents in a filtered state. These are the Bernhart Creek and Maiden Creek and it is expected that the inspectors will make a thorough examination to their very sources. It is alleged that the Maiden Creek has been polluted for several years. The inspectors will consume weeks in their work and they have authority to proceed against all parties guilty of polluting the streams.

SPOKANE, WASH.—Charles McIntyre, City Engineer, has addressed a letter to Mayor C. Herbert Moore and the Board of Public Works, stating that on account of irrigation projects lessening the volume of water in the Spokane River by 30 per cent., the present dam at the city's up-stream pumping station must be lengthened and heightened. The cost of the improvement is not given, but it is understood to be not less than \$50,000. Mayor Moore says an investigation will be made, before the City Council.

WASHINGTON, D. C.—The Commissioners have approved the recommendation of George W. Wallace, Water Registrar, that on and after July 1, 1908, the present method of rendering meter bills quarterly be abolished so far as private residences where meters are installed by the District government are concerned. In lieu thereof all such consumers will be required to pay the annual minimum rate of \$4.50 in advance on the first day of July, this sum to cover the use of 15,000 cubic feet of water during the fiscal year. All water used in excess of this amount will be paid for at the rate of three cents per hundred cubic feet. According to the data at hand it is estimated that to only 15 per cent. of all such consumers will it be necessary to send an additional bill, as the payment of the minimum rate will cover the annual indebtedness for water in all other cases. Mr. Wallace says considerable economy will result from the adoption of this plan, since under the practice that now obtains four bills have to be made out and delivered to each consumer annually.

Street Lighting and Electric Power

BALTIMORE, MD.—Superintendent of Lamps and Lighting McCuen proposes to substitute cluster incandescent lamps for arc lamps on Baltimore street between Eutaw street and Jones Falls, for which section an extra appropriation has been made for next year in order that the number of lights may be increased. There will be three or five lights on each post, of which one will burn all night, and the others will be extinguished probably at midnight. When placed close together the illumination of the street will be more effective than with the arc lamps, and, in addition, the posts for the new incandescent lamps are most artistic, and will add to the appearance of the street in the daytime. The incandescent lamps are more expensive than the arc lamps, but they are said to give a much better and more even light.

PASADENA, CAL.—Prof. C. L. Cory's report on the municipal light system of Pasadena and its possibilities, states his belief that an independent system is necessary for the future, as opposed to the present web system. He says if the plant as at present installed and operated represents an investment of approximately \$150,000, additional electric light bonds should be voted for \$200,000 providing no underground system is built. If underground conduits are included, an additional \$50,000 should be provided for the work. These conduits, and particularly the manholes, should be used exclusively for electric lights and power cables and under no condition should telephone, telegraph or messenger cables be allowed in the manholes or extra conduits of underground system.

Fire and Police

BALTIMORE, MD.—Millions of gallons of water forced through underground pipes in the business district with such high pressure that the streams can be thrown to the top of Baltimore's tallest office building without the necessity for using fire engines, is the central idea of the auxiliary fire pipe-line system, an appropriation to begin on which has been included in the ordinance of estimates for next year. The plans provide for the use of a special form of metal standing nozzle to be attached directly to the outlet of the pipe line. These nozzles will have 4½-inch outlets and will throw a heavy stream of water that will spread out as it arises. If there are a dozen such streams being thrown into the air in one block, as will be possible, the result will be a curtain of water to prevent a fire from jumping across a street. It is proposed to grid-iron the "congested value" district with piping, and by special arrangement of "shut-off" valves water can be forced directly to the neighborhood of a fire, and the remainder of the pipe-line system left undisturbed. In order to supply the pipe-line system with sufficient water when the central pumping plant is in operation, and forcing water through the pipes at a pressure greater than 60 pounds, the city water supply is to be closed off and will not be turned back into the pipe-line again until the central pumping plant shuts down.

EAST NEWARK, N. J.—An ordinance, based on the tenure of office act, establishing a police force consisting of a Chief, Marshal, two assistants and as many chancemen as are considered necessary, has been introduced in the Borough Council. It provides that the appointees shall remain members of the Department as long as they conduct themselves in a satisfactory manner, and says their salaries cannot be reduced during their term of office.

NORFOLK, VA.—An ordinance has been passed providing for a Fire District for the city and prescribing its limits. The rule is laid down that no building shall be erected unless constructed of natural or artificial stone,

concrete, brick, or iron, or a combination of these materials. Roofs shall be covered with tile, slate, metal, composition and gravel, or other fireproof material. Exception is made in regard to storage sheds constructed on pile piers or wharves on the water front, the sides and roofs of which, by permission granted by a vote of two-thirds of all the members of the City Council, may be covered with corrugated iron or other fireproof material. Fines will be imposed for violations of the terms of the ordinance.

RACINE, WIS.—The Aldermen are considering a proposition for the readjustment of the fire insurance on public buildings. It has been the custom to divide the business among the local insurance agents, and consequently an endless array of policies and premiums had to be kept track of. By the new system, city property will be divided into 246 equal parts, according to valuation, and policies covering certain portions of the entire valuation will be written. Under such a system a policy would not be issued upon a public building, but upon the city's property as a whole, and made to cover a certain portion of that property, so that all losses would be adjusted accordingly.

WATERTOWN, N. Y.—Mayor Francis M. Hugo has suggested to the Board of Supervisors the advisability of equipping a car to be used for the transportation of fire apparatus in case of conflagrations in towns in the vicinity of Watertown. A call for help was made on Oswego from Fulton a short time ago, and though the Oswego Fire Department responded promptly, the trip was not made owing to railroad transportation not being in readiness.

Government and Finance

BALTIMORE, MD.—Total appropriations for next year, amounting to \$18,754,602.18, have been announced by Comptroller Harry F. Hooper, who is also Secretary to the Board of Estimates. Six Departments—Fire, Police, School, Park, Water and Sewer—have appropriations of more than \$1,000,000 each, and the appropriation for interest on city stock also exceeds \$1,000,000. The Department of Street Cleaning and City Engineer, as well as Harbor Board, Annex Improvements, and Sinking Fund, receive more than \$500,000 each, while City Charities is allowed \$450,972 and New Schools \$400,000.

BRIDGEPORT, CONN.—As a result of the business system suggested by Mayor Henry Lee, Public Works Director C. F. A. Biltz is installing a card system in his office by which it is proposed to keep a more complete record of the work done in the cleaning of streets. Daily reports will be required from foremen of street cleaning gangs showing the amount of dirt collected, the number of square yards of street cleaned, the character of the pavement on which the work is done, the names of the employees and foremen and other interesting data. By the use of this system it will be possible to tell at any time just how much money has been expended in street cleaning and what the balance is. Daily averages will be kept and the cards will show how much work each employee is doing and the foremen as well. The record will also indicate at a glance the men who are doing the best work and the daily reports will be an individual record of every member of the street cleaning force.

PITTSBURG, PA.—The suit arising out of the effort to consolidate the cities of Pittsburg and Allegheny was decided by the Supreme Court of the United States in favor of the consolidation. The consolidation gives the city an estimated population of 550,000 and an area of 38 square miles. It will outrank Cleveland and Baltimore, give Boston a close race for fifth place in size of population, and will have the largest tonnage of any city in the world.

WASHINGTON, D. C.—As a result of the annual report of Alonzo Tweedale, Auditor of the District, which has been submitted to the Commissioners, in which he attacks the present system of accounting and handling the funds of the District, and makes a number of recommendations for improvement, a complete reform will be made in handling the District's finances. Commissioner H. L. West, who has supervision over the financial branch of the local government, has directed Mr. Tweedale to devise some tangible plan of reform. Mr. Tweedale says his principal plan is to institute a centralizing form of accounting by which all the responsibility and initiative will be invested in one person. He believes in the adoption of a complete system of general accounts arranged in analytical form, with all the corresponding books of the District affecting receipts and expenditures brought periodically in a balance therewith. He is desirous of having his books arranged so as to balance up at the end of the year in a manner to afford a complete history of the financial transactions of the District for the entire year, and at the same time bring out all the important details of the business of the various minor offices of the District. Mr. Tweedale says that under such a system it will be possible to compare the finances of the District with the statistics of the other important cities of the country and will result in obtaining absolute proof of records of all books affecting the receipts and expenditures of the District.

Refuse Collection and Disposal

BESSEMER, ALA.—The City Physician has suggested that every place within the fire limits be provided with a covered garbage can, as he believes the health of the city demands that such action be taken. The sanitary officer will be instructed to look into this matter and see that the different places in the city take the proper steps to have these cans provided.

CAMBRIDGE, MASS.—Work on installing the Piper-Walker incinerating furnace, the invention of Capt. Piper, of Brooklyn, N. Y., for the Street Department, has been nearly completed. The building itself is a two-story brick structure with steel trusses, a slate covered roof, concrete floors and a radial brick chimney, 125 feet high. A seven per cent. grade runway leads from the street, 200 feet away, up to the unloading platform occupying the second story. This is 58 by 33 feet and has four 4½-foot openings into the furnace. Connected with the furnace will be a 200-horsepower boiler which will supply power for purposes not yet fully decided on.

CHESTER, PA.—So far as the householder is concerned, the specifications regarding the collection of garbage differ from those of the collection of ashes, principally in the fact that the latter call for merely "tight" receptacles, while the former require "watertight" receptacles. They provide that all garbage shall be collected twice a week from April 1 to October 1, and once a week from October 1 to April 1, in a manner not detrimental to public health. Carts must be of metal, water-tight, strongly built, and while in motion have their tops entirely covered; while being loaded covered not less than one-half. The contractor is required to report at least twice each day at the City Hall to receive all complaints, and upon any neglect on the contractor's part, he shall be given twelve hours' notice to remedy it, and if he does not do so, the city has the right to deduct from the next monthly payments to be made to the contractor the following amounts for each offense for all violations of the contract: First, garbage neglected, per house, \$5; second, garbage carts not covered, unloaded or filthy, \$5 per cart; third, garbage not disposed of as required, \$10 per load; fourth,

garbage vessels not replaced, as required, \$1; fifth, value of any receptacle negligently injured by the contractor.

SCHENECTADY, N. Y.—The report of Health Officer Duryea referring to food inspections, sanitary inspections and an exhaustive analysis of the milk situation, shows that the city is supplied with excellent milk and that in one or two cases where there was doubt the trouble was immediately rectified. The report also urgently advises that immediate steps be taken by the city to provide an adequate method of garbage disposal. The conditions during the summer months at the one city dump were intolerable and had it not been for the action of the Board of Estimate and Apportionment, which provided a fund for covering with earth the garbage during the warm weather, it would have had to be abandoned, and as no other was available, this contingency would have been a grave menace to the health of the city. It may be of interest to note in this connection that from August 28 to November 1, a period of fifty-three days, 1,873 loads of garbage were deposited on the dump, an average of between 35 and 36 loads a day.

WATERBURY, CONN.—President John D. Freney, Health Officer Thomas J. Kilmartin, Commissioner Daniel P. Noonan, Assistant City Clerk James R. Lawlor, a special committee of the Board of Public Health, have returned from a trip to Lowell, Boston and Providence, investigating the conditions of garbage plants in those cities. Dr. Freney says the trip was especially favorable in teaching some things not to do rather than things to be done.

MONTREAL, CANADA.—Superintendent Parent has declared in a statement presented to the Fire and Light Committee that it would be possible to supply all the street lighting required by Montreal by using the power that might be secured from all the garbage incineration of the city. At the present time about one-half the garbage is consumed at the western incinerator. In the east end of Montreal garbage is used to fill up holes and old quarries. Ross and Holgate, electrical engineers, who have prepared a detailed statement as to the expense of rebuilding the incinerator, estimate it would be necessary to rebuild the incinerator plant at a cost of \$102,960, to which should be added the cost of an electric plant, at \$182,110, making a total of \$285,070, which sum would be the capital cost. The operating cost was estimated at \$65,143, from which should be deducted the sum of \$13,324 for operating the present incinerator, leaving a balance of \$51,819. The conclusions reached by the engineers are:

That the garbage of the city has a heat value sufficient to generate all the power required by street lighting by the entire city, with a very considerable amount left over for other purposes.

That the garbage available is in sufficient quantity to supply all the street lighting and leave a considerable quantity besides for power purposes.

That the arc lighting so generated from the western division station will cost slightly less than the present prices paid, with an increase of candlepower of probably 100 per cent; by the establishment of this station of the western division, garbage would be destroyed without additional cost to the city, as all charges are included in the cost of lighting and power.

Parks and City Beauty

ATLANTIC CITY, N. J.—A map technically describing the sea frontage from the inlet down to Jackson avenue, the southernmost limit of the resort, has been formally filed in the office of the County Clerk. This action is equivalent to the service of notice upon upward of two hundred individual owners of ocean frontage that it is the purpose of the city to take their holdings by purchase or condemnation to complete the long-projected beach park. City Solicitor Harry Wootton states that

the city is now prepared for a legal fight that may continue for five years and involve an outlay of possibly \$2,000,000, but which must inevitably end in placing the city in possession of the beach front and three piers that have cost \$500,000 each. It is proposed to construct a magnificent esplanade of concrete and steel, with ornamental casinos and music pavilions, free to the public. Bonds will be issued to obtain the funds needed for the acquisition of pier structures, and it is estimated the whole enterprise will involve an expenditure of approximately \$10,000,000.

EASTON, PA.—If the city is willing to pay Councilman David W. Nevin the same that he paid for a tract of land along the Delaware River, between Northampton and Spring Garden streets, call it "Riverside Park," maintain it forever as a public park and allow him to subscribe toward its purchase and maintenance, Easton will be able to obtain an excellent site for a public park. Mr. Nevin's offer holds good until January 1, 1908, and a movement has already been started to close the matter before that time.

EAST ORANGE, N. J.—Plans are being considered by the East Orange Playground Commission for making extensive improvements to the Orange oval, which has recently been purchased by the city. W. D. Hunter, a landscape architect, has made suggestions as to necessary changes, and it is planned to place an iron fence along Eaton place, to which street the oval is to be extended, and this side of the grounds will continue to be used as the main entrance. The fences on the other sides of the field will be of wood, and there will be another entrance on Greenwood avenue. The grandstand will be located in the northwest corner of the oval, and under it will be the shower baths and other accommodations for participants in the athletic events. The tennis courts will be to the west of the main entrance. On the opposite side will be a children's playground, with parallel bars, swings, traveling rings and other apparatus.

HARRISBURG, PA.—The Park Commission has presented to Councils a report covering its term of office and showing the amount of work that has been accomplished in the city's parks and highways. The report states that the Commission was organized November 12, 1902, and found no funds at its disposal and no lands under its custody except Gross Park and an unnamed strip south of Mulberry street. Action was then taken to place all the parks under the care of the Commission; Warren H. Manning, the landscape architect, was chosen January, 1903, as advisor, and the park system has gradually developed, in an effort to bring the parks to the people that need them, instead of compelling the people to go to the parks. The available length of the river front parks alone, including what has been acquired through the efforts of this Commission, is now almost two miles. A park nursery has been established on Hargest's Island, where trees and plants purchased elsewhere may be grown to proper planting condition, and in which also plants and trees may be propagated for the uses of the city. Playgrounds have also been established, and it is stated that Harrisburg has the only public golf course in Pennsylvania.

HOLYOKE, MASS.—At a meeting of the Business Men's Association recently held, the "City Beautiful" was the chief topic, and various methods were discussed by which the city might be beautified, such as obtaining a river front, obliterating bill-boards, improving alleys, and the laying out of playgrounds at the different school buildings. Mayor N. P. Avery was the principal speaker, and gave a general outline of the probable work which may be recommended by the expert who has been

employed for the purpose of arranging plans for civic beauty. He advocated purchase of land on the river if it could be obtained at a reasonable price, and making the whole river front an object of great beauty. He also thought if playgrounds were attached to the different school-houses, enthusiasm might be aroused among the school children and they could render valuable assistance in carrying out the plans.

PITTSBURG, PA.—The suggestions presented by the Pittsburg Chapter of the American Institute of Architects, for the improvement of the city, are a permanent feature of the architectural exhibition being held in the Carnegie Institute. The suggestions are in the form of drawings indicating possible improvements, both in the downtown portion of the city adjacent to the Court House, and also in the Oakland district, comprising the surroundings of the group of institutional and monumental buildings of the Carnegie Institute, Carnegie Technical School, new High School, and the new Soldiers' Memorial Building, and including the main entrance to Schenley Park from Grant Boulevard. The suggestions for the improvement of the downtown section have been prompted by the necessity of providing wide avenues for the transportation lines to the business district, the locating of public and semi-public buildings with regard to their logical relation to the community and to each other, and obtaining the pleasing effect which results from a combination of order and usefulness.

ST. LOUIS, MO.—George E. Kessler, of Kansas City, landscape architect for the Louisiana Purchase Exposition, has filed a report with the Board of Public Improvements stating that the grounds have now been restored and are ready to be officially turned over to the city. There are at present nine miles of paved park drives, the Exposition Company having laid 100,000 square yards of park paving. The sewer system includes both underground and surface drainage; 75,000 trees have been planted, and more than \$24,000 expended for bridges and drives. On Art Hill stands the Art Museum, constructed of stone, concrete and steel, near which is the statue of Saint Louis, placed there by the Exposition Company as a gift to the city. The banks of the River Des Peres, running through the park, have been strengthened, and two hundred acres of meadow grassed, as well as one hundred acres of the former fair grounds turned into lawns.

SUPERIOR, WIS.—The work of planting about 1,800 trees in the Fifth and Seventh Wards of the city, from Butler to Weeks avenues, on the avenues and the cross streets, has just been finished. The price paid was \$2.15 per tree and the guarantee of the contractor is for three years. The trees put in are box elders, maples and elms, it being the practice of the city to put in these varieties. The members of the Board of Works and of the Park Commission regard the tree planting as one of the best improvements the city can make.

Rapid Transit

CHICAGO, ILL.—The Chicago City Railway Company has issued special instructions to conductors and motormen relating to the pay-as-you-enter cars. They treat particularly of: Accidents occurring by cars being started while passengers are in the act of alighting from or boarding car, extreme overcrowding of cars, jostling and undue crowding of passengers, particularly ladies, while entering or leaving car; collection of fare upon the rear platform; better heating and ventilation; comfort of trainmen. In regard to extreme overcrowding of cars, the instructions state: "It is believed that as the con-

ductor is now placed in a position to control the loading of car, it will be possible to at once prevent a repetition of the 100 to 140 passenger loads of the past. Whenever there are in excess of 80 passengers upon the car the conductor will step to the outer edge of the platform and, with arm extended to bar the 'entrance' step, courteously request passengers to 'take next car, please.' Such passengers as ignore this request must not be forcibly ejected, but the reason for the request being made will be courteously explained by the conductor, which action it is expected will thereafter insure the co-operation of the passenger."

CLEVELAND, O.—Council has rejected a proposal from the Cleveland Electric Railway Company to make a six months' test of three-cent fare on all its lines within the city. The company offered to surrender all its city grants under which it is enabled to charge a five-cent fare and sell tickets at the rate of eleven for 50 cents. In return, the company asked for new grants for twenty-five years, covering its entire city system, the rate of fare to be charged to be determined after a test covering a period of six months. The books of the company were to be opened by a board of expert arbitrators. If these experts found that a three-cent fare had produced six per cent. on the cost of reproduction of the property, including pavements, foundations and special improvements, then the rate of fare should continue to be three cents during the life of the new grants. If three-cent fare is not sufficient to produce six per cent., then the rate of fare should be fixed so that it will return the required six per cent.

NEW ALBANY, KY.—The Common Council has unanimously adopted a resolution that gives to the street car company the alternative of complying with its contract or having its franchise forfeited at the expiration of twenty days. The resolution provides that within the period mentioned the street railway company must establish a ten-minute line, paint the trolley poles and lower the trolley wires as provided, or the city will take steps to forfeit the franchise.

NEWARK, N. J.—Much discussion has been given by the Commissioners of the Board of Works, as to the wisdom of enacting a "no-seat-no-fare" ordinance, similar to the Jersey City law, which was recently sustained by the Supreme Court. President Denman is of the opinion that the people of Newark would have to be educated to wait for the next car, and that might be a matter of police regulation and an adequate supply of cars. Commissioner Lambert says he is not ready to commit himself on the Jersey City ordinance, but he advocates better service and regulation of strap-hanging by providing that every standee have at least two lineal feet in lieu of his fare and a seat. For every two feet of car length he would apportion three passengers, two with seats and one hanging to a strap. Mr. Lambert states it is a question if the charter empowering the Public Service Corporation's subsidiaries to operate in Newark would permit of a "no-seat-no-fare" ordinance in Newark. The Jersey City ordinance was based on a clause in an old grant which gave the company authority to operate cars "subject to regulations by the city."

PHILADELPHIA, PA.—The Auto Transit Company in response to the continued demand of downtown business men, has arranged a new schedule and extended its route to Wharton street. Extensive plans are now being made for the betterment of the system, and new vehicles will be added within the next month or two. It is proposed to extend the line still further south to Jackson street, and when Broad street is completed to League Island the buses will be run all the way down.

Miscellaneous

ALBANY, N. Y.—In a decision interpreting the provisions of the Public Service Commission law prohibiting stock watering the Up-State Utilities Board declares emphatically that it will not countenance any attempt to evade the law by the absorption of competing public service corporations through purchase, rather than by merger or consolidation. This determination was reached in the case of the Lockport Light, Heat and Power Co.

CHICAGO, ILL.—Mayor Busse has signed the ordinance granting to the Chicago Telephone Company an extension of its franchise until January 8, 1929, and put an end to negotiations between the company and the city which began December 16, 1905, and continued since that date. The ordinance requires the telephone company to pay to the city 3 per cent. of the gross receipts and to allow a discount of 25 per cent. from current rates on telephones for municipal uses. Rates to subscribers are materially reduced. The city reserves the right to terminate the grant and to purchase the lines on twelve months' notice in 1919 or in 1924, and to readjust rates at the end of thirty months and of each succeeding period of five years thereafter.

DALLAS, TEX.—Mayor Hay has received a communication signed by nine ice and fuel dealers requesting the city to put in force some provision for the inspection of weights and measures. Mayor Hay said that the city was not now financially able to create any new offices, but it has been suggested that the office might be made self-sustaining by the collection of fees.

NEW YORK, N. Y.—The Public Service Commission has passed a resolution directing the Corporation Counsel to begin proceedings under the Saxe law to condemn all the franchises held by the New York Central Railroad Company on Eleventh avenue and West street and on the river front from Spuyten Duyvil to St. John's Park. The Saxe bill gave to the company one year in which to reach an agreement with the old Rapid Transit Commission as to the means which should be adopted for the removal of the tracks from the street surface. It was provided that in the event of an agreement not being reached within the time named in the bill the city should have power to condemn. The Rapid Transit Commission suggested that the tracks should be placed underground, but the company objected to this and asked for an elevated structure, and threatened that if any attempt was made to interfere with its surface tracks the constitutionality of the Saxe bill would be attacked.

PEORIA, ILL.—An elevator ordinance is being considered by Council, designed to provide for the safety of the public by forcing those who operate elevators to take an examination before a commission before being given a license to carry passengers in this manner.

ROCHESTER, N. Y.—Owing to the many attempts at suicide in this city, Coroner Thomas A. Killip has presented to Council an ordinance similar to the one now in force in Chicago, designed to prevent the sale of poison except under the most rigid restrictions. The proposed ordinance prohibits the sale of carbolic acid, or any extract or product thereof, or any preparation or compound of which it is an element or ingredient, containing more than five per cent. of carbolic acid, except upon written prescription or order of a duly licensed physician, which must bear the date of the day on which it is made, the signature of the physician, his address, and name and residence of patient for whom it is intended. These prescriptions and orders shall be open for the inspection of the Coroner, State Attorney, Assistant State Attorney, City Prosecutor, Assistant City Prosecutor, Chief of Police, or any regular police officer of the city.

LEGAL NEWS

A Summary and Notes of Recent Decisions—Rulings of Municipal Interest

CONSTITUTIONALITY OF PUBLIC SERVICE LAW

Saratoga Gas, Electric Light and Power Company vs. Public Service Commission.—The Saratoga Company appealed from a decision of the Commission fixing a maximum charge for gas and electricity. The company questioned the constitutionality of the law creating Public Service Commissions, particularly the clause delegating the power to fix rates. In his opinion, Presiding Justice Smith states that there is a governmental power to fix maximum future charges of the carriers by railroads vested in the Legislature of the State. Although legislative power cannot be delegated, the law making body, having enacted into the statutes the standard of charges which shall control, it may entrust to an administrative body not exercising in the true sense judicial power, the duty to fix rates in conformity with that standard. Regarding the claim that the statute fixes no such standard, the court holds that the injunction to fix the rate "within the limits prescribed by the law" is a sufficient standard. The law is settled that the Legislature itself cannot fix a rate which would be confiscatory of the property of the corporation. The law is equally settled that a public service corporation has not the right of a purely private corporation to charge what it will for its product. The function of the Public Service Commission was accordingly held to be administrative, and not legislative.—New York Supreme Court, Appellate Division.

COMMERCIAL LIGHTING

Crouch et al. vs. City of McKinney.—A city owning and operating an electric light plant, as authorized by Revised Statutes, 1895, empowering cities to provide for lighting the streets, etc., may, after discharging its duty to the public, sell its surplus electricity to private citizens for lighting. So long as the affairs of a city are conducted by its Council in a reasonably judicial manner, its acts will not be interfered with by the courts, unless it is transcending its powers, or a clear right has been withheld, or a wrong perpetrated or threatened. One seeking to restrain a city owning and operating an electric light plant to light its streets from selling electricity to private persons for lighting must show that the city did not sufficiently light its streets, and that it was financially able to extend its system for lighting its streets, since the city, after discharging to the best of its ability its duty of lighting the streets, could sell its surplus power to private citizens for lighting. In a suit to restrain a city owning and operating an electric light plant to light its streets from selling electricity to private citizens for lighting, an instruction that the city had no right to sell electricity until all parts of the city were sufficiently supplied with street lights was erroneous, because it ignored the question of the financial ability of the city to furnish further lights for the streets. Where a city maintains a water works system, the question of the extension of the system must be left to the sound discretion of the city authorities. The surplus of the proceeds of a municipal water works system remaining after the payment of the expenses of maintaining the system as installed are current funds, and the city may divert the same to other needs of the city. Where a city owning an electric light plant has a surplus of electricity remaining after discharging its public duty, it may expend current funds to put that power in use so as to supply electricity to its citizens for private use. A city has no power to grant an exclusive franchise to a company to furnish light to its inhabitants. A company which has obtained from a city a franchise to furnish light for its inhabitants cannot object to the grant of a similar right to some one else or to the furnishing light by the city itself to its citizens.—Court of Civil Appeals of Texas.

RESPONSIBILITY FOR DEFECTIVE STREET

McHugh vs. Inter-State Paving Co.—A pedestrian on a street injured by stepping in the trench from which the curbstones have been taken up is barred from recovery by contributory negligence, she knowing that the place was pulled up, and that the curbstones were on the sidewalk, and she, according to her testimony, having walked only "a little carefully," and not having noticed where she was stepping; she being required literally to pick her steps.—New York Supreme Court, Appellate Division, Second Department.

CITY ENGINEER'S TENURE OF OFFICE

Parsons vs. Breed.—The legislation for the incorporation and government of cities of the first class, adopted pursuant to Constitution, 1891, requiring the General Assembly to provide by general laws for the government of cities, etc., is in lieu of existing legislation on the subject, and repeals by implication a special charter given to a city of the first class. The Kentucky Statutes of 1903 providing that each executive board of cities of the first class may appoint a chief of each department under its control, and empowering the Board of Public Works to appoint a Chief Engineer, adopted in obedience to Constitution, requiring the General Assembly to provide by general laws for the government of cities, etc., repeals the special charter of Louisville, creating the office of Principal Engineer, providing for the manner of filling it, and its term. The office of Chief Engineer is created by the Kentucky Statutes, 1903, empowering the Board of Public Works in cities of the first class to appoint a Chief Engineer, and the officer is a Chief of a Department under the control of the Board of Public Works, and removable by it without notice and without cause. Where neither the Constitution nor the statutes fix the term of office, the appointee holds at the pleasure of the appointing power, though it attempts to fix a definite term. The Board of Public Works of a city of the first class created by the Kentucky Statutes, 1903, and empowered by section 2810 to appoint a Chief Engineer, has no power to appoint a Chief Engineer for a fixed term, but he is removable at the pleasure of the Board.—Court of Appeals of Kentucky.

TERM OF OFFICE

Orahood vs. City and County of Denver.—The termination of an officer's term necessarily implies the cessation of salary. Constitution providing that, except as otherwise provided, no law shall extend the term of any public officer or increase or diminish his salary after his election, does not restrict the people's power to amend the Constitution; and hence Constitution providing that the terms of all officers of the city of Denver should terminate on the consolidation of the county and city, deprived the City Attorney of his office and right to further salary, though the term for which he had been elected had not expired.—Supreme Court of Colorado.

DEFECTIVE STREETS

City of Henderson vs. Sizemore.—A city must keep its streets in a reasonably safe condition for public travel, and is liable on its failure so to do for injuries received by a pedestrian in consequence thereof. A pedestrian injured in consequence of a defective street held not required to anticipate the defense of contributory negligence, available only on a plea of contributory negligence.—Court of Appeals of Kentucky.

VACATING STREET

City of Indianapolis vs. L. C. Thompson Mfg. Co.—A judgment in proceedings for an award of damages for vacating a street in the circuit court by way of an appeal from a hearing before the Board of Public Works in proceedings under the statute for the vacation of streets is not appealable under Acts 1905, providing that the judgment of the court shall be final, and no appeal shall lie. A final order vacating a street is self-executing, and when made the street is closed to the public, and one injured thereby may sue for damages. The Legislature may grant or deny appeals; there being no vested right to appeal.—Appellate Court of Indiana.

EXEMPT FROM CIVIL SERVICE

Peters vs. Adam et al.—Under Civil Service Law, Laws 1899, and 26 of the Buffalo Civil Service Commission, a transfer of a city employee from an exempt class to a competitive class held proper, though he did not stand highest on the eligible list. The position of Chief Clerk of the Bureau of Engineering of the city of Buffalo, being clearly a confidential one, and embracing among its duties those of Secretary to the Commissioner of Public Works and to the Deputy Engineering Commissioner, belongs in the exempt class, and not in the competitive class.—New York Supreme Court, Special Term, Erie County.

DETACHMENT OF TERRITORY

In re **Town of Leroy.**—The territory included in an incorporated town was three-fourths of a mile in length, and less than half a mile in width. Eighty acres thereof were platted into residence and business lots. The balance was agricultural lands. Held, that the refusal to sever the agricultural lands from the town was proper; municipalities having the power, within reasonable bounds, to include within their territory agricultural lands.—Supreme Court of Iowa.

REASSESSMENT FOR STREET PAVING

Cawker et al. vs. City of Milwaukee and Central Bitulithic Paving Company.—Under Sanborn's Supp. St.-1906, providing that city authorities shall make a new special improvement assessment when the original assessment is invalid because the work has been done without authority of law, applies where assessments are void because of the invalidity of the contract under which the work was done, the contract not requiring validation in order that a reassessment may be valid; the principle being that the Legislature could in the first instance provide for the levying of special assessments for improvements made without any previous contract, and taxation which the Legislature may originally authorize it may retrospectively validate by providing for a reassessment.—Supreme Court of Wisconsin.

CHARGES FOR TELEPHONE

Home Telephone and Telegraph Co. vs. Los Angeles.—A State has power to regulate charges for telephone service and to delegate such power to municipalities. Under Constitution and Los Angeles City Charter, the City Council's power to fix telephone rates held not limited to the right to contract for a specified rate once for all so as to preclude the passage of a subsequent ordinance changing rates once fixed. Constitution providing for the regulation of telegraph rates does not contemplate the passage of a general State law, or regulation through commissions, but by delegation of power to municipalities. Under Los Angeles City Charter, the City Council had power to require telephone companies doing business within the city to submit reports of the value of their plants, receipts, and expenditures in order to enable the council to fix reasonable rates. Regulation of telephone rates by municipality held an exercise of the police power of the State, and, though capable of being surrendered or suspended, such surrender or suspension will not be presumed. A city held not to have surrendered its power to establish lower telephone rates from the maximum rates fixed in a 50-year franchise by the giving of such franchise, under California statutes 1901, providing for certain telephonic and electrical facilities furnished gratis to the city and a 2 per cent. gross earnings tax.—United States Circuit Court, S. D. California.

POLICE AND PENSION ROLL

In re **Hickey.**—One exercising rights of citizenship for upwards of twenty-one years, and discharging the duties of a police officer for sixteen years, until retired and pensioned for disability, cannot be summarily removed from the pension roll on the ground of fraud in the proceedings for his naturalization, committed by others without his knowledge.—Supreme Court, Special Term, New York.

CHANGE OF STREET GRADE

Bond vs. City of Philadelphia.—A lot, before a street grade was changed, was 5 feet below the surface. After the change it was 16 feet below. Held, that the cost of raising the lot to a height which would correspond with that it had before the change in grade was made was inadmissible in proceedings to assess damages.—Supreme Court of Pennsylvania.

POUND-STOCK AT LARGE

Chapman vs. City of Mayfield.—Under the Kentucky Statutes 1903, giving the Board of Council of a city of the fourth class the right to establish a pound and make regulations for impounding stock, and to prohibit the running at large of stock on the city streets, and providing that the Council shall have power to make ordinances to carry into effect powers in that section granted and to do all things belonging to the police of incorporated cities, a city of the fourth class was authorized to pass an ordinance prohibiting stock from running at large within the corporation limits and imposing a fine for its violation.—Court of Appeals of Kentucky.

PARK ASSESSMENTS

State vs. Several Parcels of Land et al.—Public parks belonging to a city of the metropolitan class are not liable to taxation, and cannot be taxed by the city for any special benefits supposed to have accrued by reason of the establishment of a boulevard. Under the Compiled Statutes of 1897, special assessments may be levied to pay for property appropriated for boulevard purposes upon all property that is specially benefited, and such special assessments are not limited to property which abuts upon, or is adjacent to, the boulevard.—Supreme Court of Nebraska.

SALE OF PROPERTY

Carlisle Gas & Water Co. et al. vs. Carlisle Borough.—A borough or other municipal corporation has the incidental or implied right to sell its real and personal property of a private nature, held for municipal emolument or advantage, in the absence of a statutory or charter restriction. A borough undertaking to furnish water for its inhabitants acts in a private, and not a governmental, capacity. Where a borough purchased stock in a corporation organized to supply its inhabitants with water and gas, it might sell such stock, unless prohibited by its charter or statute. A provision in the ordinance authorizing the purchase that, so long as the borough held one-third of the stock, it should be entitled to appoint three managers of the company, did not prevent the borough from selling its stock. Where a borough purchased certain stock of a corporation organized to supply its inhabitants with gas and water, if the borough's relation with the company constituted a partnership, the borough was entitled as a partner to dispose of its interest, subject to the rights, liabilities, and equities of the firm.—Supreme Court of Pennsylvania.

BOND—FRANCHISE

Choctaw Ry. & Lighting Co. vs. Incorporated Town of McAlester.—Where a street railway company executed a bond to a town to secure the construction and operation of a street railroad under an ordinance granting a franchise therefor, the sum named as the penalty of the bond was recoverable for breach thereof as liquidated damages.—Court of Appeals of Indian Territory.

CHANGE FROM VILLAGE TO CITY

State ex rel. Einstein vs. Northup et al.—Under the provisions of Compiled Statutes 1903, each village in this State containing the population required by the statute becomes a city of the second class, without any action being taken on the part of the municipality. Where the Trustees of a village passed an ordinance mistakenly declaring its population sufficient to make it a city of the second class, and providing for the election of city officers, and at the election the number was sufficient, held not to render the election invalid.—Supreme Court of Nebraska.

STATUS OF VETERAN APPLICANT

Boyer vs. Mayor, etc., of City of Creston.—Where a non-veteran was appointed to a municipal position over a veteran applicant, after hearing as to qualifications by the appointing power, such appointment will not be set aside, under Acts, giving veterans a preference right to appointments, if equally qualified, unless there is a clear showing of abuse of discretion.—Supreme Court of Iowa.

DOG LICENSE

Fincher, Marshal vs. Collum.—Under a general welfare charter clause in usual form, a City Council may pass an ordinance requiring owners of dogs to register them, secure tags, and pay fees therefor, and authorizing the killing of all untagged dogs; also making the owners of untagged dogs subject to punishment. The fact that the tag fees on female dogs are higher than those on male dogs does not render such an ordinance invalid. Such ordinances are sanitary and not fiscal in their nature, are an exercise of the police power, and not of the taxing power.—Court of Appeals of Georgia.

ANNEXATION OF TERRITORY

Carrithers et al. vs. City of Shelbyville.—The creation of or annexation of new territory to a town is a matter within the sole discretion of the Legislature, and does not in any manner depend on the will of a majority of any of the inhabitants living within the territory. The act of incorporating towns and enlarging or restricting their boundaries is legislative and political, and in its exercise of discretion in such matters the Legislature has plenary power.—Court of Appeals of Kentucky.

BUILDING REGULATIONS

Olmstead vs. People, to Use of Town of Littleton.—A frame building is one constructed with a timber frame covered with boards or shingles, and does not include a wooden building covered with corrugated iron. The erection of a building entirely of timber, except the outside of the end and side walls and the rafters, which were to be covered with corrugated iron, did not violate a city ordinance prohibiting the erection of "frame buildings."—Supreme Court of Colorado.

TRADE NOTES

Arc Lamps and Lighting.—The Fort Wayne Electric Works, Fort Wayne, Ind., in Bulletin No. 1099, describes their enclosed direct current multiple arc lamps. They can be operated on the same circuit with incandescent lamps, as they use a current of 110 or 220 volts. Bulletin No. 1101 describes the multiple system of alternating current enclosed arc lighting for street service, designed to meet the demand for a simple and inexpensive method of lighting small towns or isolated sections of larger cities.

Artesian Wells.—The Artesian Well and Supply Company, 434 Banigan Building, Providence, R. I., reports that during the year preceding September 30, 1907, it completed drilling forty-one wells in New England and thirty-five in New York. Of the latter, nineteen were in Douglaston, and twelve in Little Neck, all being flowing wells and yield nine million gallons per day. The firm also has a number of wells in process of drilling.

Electric Air Drill.—Booklet 20A, issued by the Ingersoll Rand Company, 11 Broadway, New York City, twenty pages, eleven illustrations, describes the new Temple-Ingersoll Electric-Air Drill. This novel device, it is claimed, not only completely solves the problem of employing the electric current in the driving of rock drills, but avoids entirely the conditions which make the successful employment of the electric drill impossible. The drill is air-operated, with special advantages of its own, especially in the increased force of the blow struck and the great saving of power, and it should be known by all who have any interest in rock cutting.

Flushing Machines.—The Sanitary Street Flushing Machine Company, of St. Louis, Mo., has sold three flushing machines to the city of Newark, N. J.

Modern Welded Pipe.—The National Tube Company, Pittsburg, Pa., publishes a handsomely illustrated booklet describing the manufacture and characteristics of modern welded pipe. The illustrations show the handling of the ore at the docks at the head of Lake Superior, the process of running pig-iron into ladles, the mixer, converter, the rolling of the plate, and the finishing, as well as some intermediate operations. Various methods of testing are described and illustrated. Photographs showing relative corrosion of steel and wrought-iron pipes are also given.

Turbine Pumps.—The Tacony Iron Company, Land Title Building, Philadelphia, in Catalogue 3, Bulletin 1, describes four types of turbine pumps, "O," "M," "S," and a sump pump. Type "M" is built single or multi-stage in sizes up to and including 2-inch diameter discharge. Type "S" is made in sizes 2-inch or larger in single stage only. Type "O" is a multi-stage pump, with discharge greater than two inches. The sump pit and sewage pump has a vertical shaft, supported from the under side of a bedplate by a pipe through which the shaft runs. The bedplate also supports the motor and the thrust-bearing to carry the weight of the moving parts. This is an excellent device to remove sump water. It can be arranged to start and stop automatically by floats and special electric switches, according to the rise and fall of water in the suction pit. As the pump is submerged, no valves are needed.

Municipal Electric Lighting.—Four years ago the Allis-Chalmers Co. installed a direct connected generator in the Electric Light and Power Plant of the city of Bartow, Fla. This plant supplies night service only of fourteen hours' duration and there has not been a single shut-down in two years chargeable to the engine. Practically no repairs have been required, a single set of new brushes for the exciter being the only item of expense for the electrical equipment. Within this period the number of consumers has more than doubled and the conclusion seems justified that it is profitable to operate such a plant in a city of 2,000 population, the size of Bartow.

Playground Equipment.—A diploma of a gold medal has just been awarded to the "model of playground, showing possibilities of inexpensive apparatus" which was prepared by Henry S. Curtis, Supervisor of Playgrounds, Washington, D. C., and exhibited at the Jamestown Exposition. The model is a miniature playground about six feet square, mounted on a table. It is peopled with a multitude of small dolls, who take the place of the children. The equipment is similar to that of the Washington playgrounds.

Smokeless Stoker.—A new smokeless stoker on a 500-horsepower boiler in the Public Service Corporation's power plant in Newark, N. J., was recently given a test in the presence of Smoke Inspector Daniel Maloney and an Aldermanic committee. The "gravity underfeed stoker," as it is called, was attached to one boiler in a battery of six. The workings of the device were satisfactory and it is expected that the other fifteen boilers will be similarly equipped. Each stoker cost \$3,700, and \$1,500 more was spent in installing it.

Turbo-Generator.—The Narragansett Electric Lighting Company, Providence, R. I., is installing a new vertical Curtis turbine with generator of 2,250 kilowatts capacity, which it recently purchased from the General Electric Company, Schenectady, N. Y. The machine occupies only one-fourth of the space that would be occupied by a reciprocating engine of the same capacity.

PATENT CLAIMS

870,068. **Fire Alarm.** Robert M. Whipple, Mayfield, Idaho. Serial No. 379,781.

An alarm of the class described comprising a tube provided at its lower end with a bulb, an expansible fluid contained in the tube and the bulb, the fluid being a conductor of electricity, a rod provided with a threaded portion, a cylindrical nut engaged upon the threaded portion of the rod and provided with a circumscribing groove, a bracket including a collar portion fitting in the groove, the rod being bent at its upper end to extend above the upper end of the tube, a wire suspended from the bent portion of the rod and extending into the tube, a conductor wire leading into the bulb and into the fluid contained therein, a wire connected with the lower end of the rod, a battery interposed in one of the said wires, and an electric bell to which the wires are connected.

870,129. **Reinforcing Bar for Concrete Structures.** Arthur Priddle, San Francisco, Cal. Serial No. 335,391.

A reinforcing element for concrete structures, comprising a flat metallic bar having slits formed longitudinally therein, and having the portions of the bar adjacent to said slits bent laterally in opposite directions at right angles to the plane of the bar, whereby flanged elliptical openings are formed, and the base or bottom of each flange or bent portion is in the form of an arch lengthwise of the bar, and the outer edge is in the form of an arch at right angles to the plane of the bar.

870,329. **Smoke Separator.** Rudolph H. Weber and David W. Smith, Kansas City, Kan. Serial No. 356,286.

A smoke separator comprising a tank containing liquid, a smoke pipe having its end submerged in the liquid, a rotary disk mounted horizontally in the tank vertically above the end of the smoke pipe, means for rotat-

ing the said disk, and a strainer consisting of slotted foraminous walls depending from said disk.

870,498. **Manhole Cover.** William Egle, Detroit, Mich., assignor to Eureka Manufacturing Company, Detroit, Mich., a Corporation. Serial No. 338,204.

In combination with the apertured wall of a tank, an arm hinged thereto in position to swing in front of the aperture, said arm being formed so that the portion intermediate its hinged portion and the outer end whose projection in front of the aperture is not desired is not in interfering position with the passage of an object thereabove and through the aperture, a manhole cover and a yoke supported thereby, said yoke being adapted to engage with its ends against those portions of the walls on each side of the aperture, a universal joint connection between said yoke, said cover and the outer end of the arm, and a screw bolt provided with a hand wheel whereby the cover may be drawn closely against the edge of the opposite face of the wall from that engaged by the yoke, and adapted to be swung over said intermediate portion of the arm and through said aperture, substantially as described.

870,269. **Form for Sewers and the Like.** George G. F. Boswell, Lawrence, Ind. Serial No. 357,354.

A form for sewers and the like including a pair of segmental inner holders, radially extending braces with notched edges, fasteners for adjustably securing said braces to the holders, said fasteners consisting of a plate extending over said brace with four extensions projecting through notches in said brace and overlapping said inner holder, and mold plates held in position by the outer ends of said braces.

870,574. **Fire Alarm System.** Charles W. McDaniel, Kansas City, Mo. Serial No. 313,175.

In a combined alarm and telephone system, the combination with a telephone line leading from a substation to a central exchange, of an alarm circuit at the substation, a source of direct current and a rheotome alarm bell for said alarm circuit, thermostatic mechanism for controlling the alarm circuit, an electromagnet having a primary winding included in said alarm circuit, a secondary winding for the electromagnet adapted for connection with the telephone line, the armature of said electromagnet being normally disposed to open the secondary circuit, and signalling apparatus and a source of current at the central exchange, actuation of the alarm circuit causing actuation of the electromagnet to close the secondary circuit, whereupon induced current will flow through the secondary circuit and the telephone line to cause actuation of the signalling apparatus at the central exchange.

870,700. **Street Flusher.** George H. Thebus, Belleville, Ill. Serial No. 351,629.

A street flushing device including a truck having front and rear axles and connected by a frame, one end of which is pivotally connected with the front axle, the opposite ends of the rear axle being extended laterally beyond the adjacent wheels of the truck, a hollow frame extending across the truck and provided with a plurality of discharge orifices, hangers depending from the extensions of the rear axle and forming a pivotal connection between the hollow frame and rear axle, a hose connecting the frame with a source of water supply, main and auxiliary valves for controlling the supply of water to the hollow frame, and auxiliary trucks for supporting the hose.

870,866. **Method of Building Dams.** William L. Church, Newton, Mass. Serial No. 385,448.

The method hereinbefore described of building a dam, the same consisting in building a skeleton base composed of a series of isolated piers separated by unobstructed water courses, then building on said skeleton base above the said water courses, the upper works of the dam, and then completing the base by successively closing the spaces between the piers below the upper works.

870,887. **Garbage Receptacle.** Torbett H. Johnston, Kansas City, Mo. Serial No. 358,870.

In a garbage receiving mechanism, the combination with a rectangular vessel having an open top and a perforate bottom, and having one vertical and one inclined end, of two bundles, one secured to the outer side of one end, and the other secured transversely to opposite sides within said vessel, a frame in and out of which the vessel is slidable horizontally, and a cover hinged to the frame and adapted to cover the open top of the said vessel.

870,889. **Paving Block.** Alexander Kelley, Wilmington, Del. Serial No. 353,595.

In combination with the rails of a street railway a paving block having a tongue formed therewith adapted to fit between the flanges of the rail and a groove formed in its end adapted to co-operate with a similar groove in an adjacent block and a rod to pass through said grooves as specified.

NEWS OF THE SOCIETIES

National Municipal League and American Civic Association.—These two organizations, meeting together for the first time in joint sessions, were convened at Providence, R. I., November 19, the National Municipal League celebrating its thirteenth annual meeting and the American Civic Association its third meeting. Besides the joint meetings, separate sessions were held, at which the special objects of each society were discussed—the League to secure united action for good city government and the Association to bring about clean, healthful and attractive living conditions. Delegates to the number of more than 200 represented reform organizations of the larger cities, Boards of Trade and commercial associations, while many others were college professors, editors, landscape architects, civic designers and city officials. The meeting convened with President Charles J. Bonaparte, Baltimore, Md., in the chair. Addresses of welcome were delivered by Governor Higgins, of Rhode Island; Mayor McCarthy, of Providence, and President W. H. P. Faunce, of Brown University. President Bonaparte responded for the League and President J. Horace McFarland for the Association. Greetings from the Canadian Union of Municipalities were extended by its secretary, W. D. Lighthall, of Montreal. At separate sessions Clinton Rogers Woodruff spoke of current events in municipal development, and a paper by Brand Whitlock, Mayor of Toledo, O., on the exclusion of the influence of national parties and politics from city elections was read. The Association, in separate session, took up the matter of definite work for small communities. A whole evening was devoted to a consideration of the work done and to be done in connection with the preservation of the beauty of Niagara Falls. Half a day was given by the League to the question of taxation—nineteen separate addresses on special topics being delivered by specialists. Municipal adornment, the smoke nuisance, billboards, forest preservation and good roads were subjects of addresses at the second day's session of the Association. Electoral reform and non-partisan government were discussed before the League and in the evening President Bonaparte spoke of government by public opinion, referring specially to the work of the press. At a joint session on the third day of the meetings the forces molding the city of the future were explained by George E. Kessler, of Kansas City, Mo.; President Faunce, of Brown University; Homer Folks, of New York; Robert Watchorn, Commissioner of Immigration; Professor Albert Bushnell Hart, of Cambridge, Mass., and Clinton Rogers Woodruff. At the separate sessions on the same day the League listened to addresses on the various plans of city government, such as those of Galveston, Des Moines and Newport. The Association joined in a round-table conference on work among children, in which J. Horace McFarland, Harrisburg, Pa.; Miss Mabel Hill, Lawrence, Mass.; Professor Charles B. Kent, Yale University; Miss Mary Marshall Butler, Yonkers, N. Y.; Mrs. Edwin F. Moulton, Warren, O., and Dwight F. Davis, St. Louis, Mo., took part. At the joint session on the last day municipal health and sanitation was the sole topic and it was discussed by many prominent sanitarians. Officials of the National Municipal League for the ensuing year were elected as follows: President, Charles J. Bonaparte, of Baltimore; Vice-Presidents, Charles Richardson, of Philadelphia;

Thomas N. Strong, of Portland, Ore.; Henry L. McCune, of Kansas City; Walter L. Fisher, of Chicago, and James P. Baxter, of Portland, Me.; Secretary, Clinton Rogers Woodruff, of Philadelphia; Treasurer, George Burnham, Jr., of Philadelphia.

National Tax Conference.—Several Governors of States, many taxation experts and delegates from many States met at Columbus, O., November 12, at the first national conference on taxation. Governor Curtis Guild, Jr., of Massachusetts, was made permanent chairman. In his address Governor Guild spoke of the inequality of the poll tax. In a Massachusetts manufacturing town 90 per cent. of the voters paid a poll tax. In Boston, with 100,000 voters, from a third to a half never contribute a cent directly to the support of the government. He expressed the hope that the conference would be instrumental in bringing about some broad, rational, logical, uniform system of taxation for the city, State and nation. Professor John B. Phillips, of the University of California, favored a habitation tax as the most equitable. Such a tax is in successful operation in French and German cities, in Tasmania and in Montreal, Canada. This is a tax on the rental of buildings and is levied on those occupied. Solomon Wolff, of the Louisiana State Tax Commission, spoke of "Home Rule in Taxation"; that is, a separation of the sources from which the State and local taxes are drawn. Professor Isaac A. Loos, of the State University of Iowa, spoke of "Limitations of the Purposes for Which Taxes May Be Levied." Charles L. Reid, of Cincinnati, O., spoke on "Co-organization of State Taxation" and proposed the assembling of a Council of States to formulate standard bills. The proceedings of the convention will be published in time to be of use to the various State Legislatures this winter.

Washington Society of Engineers.—At a meeting of the Society at Washington, D. C., November 19, resolutions, introduced by M. O. Leighton, of the Geological Survey, were passed to the effect that in the opinion of the Society the remains of Pierre Charles L'Enfant, Major in the Continental Army, the engineer who conceived and planned the city of Washington, now occupying an unmarked grave, should be removed and reinterred in the Arlington National Cemetery.

Bridgeport Board of Trade.—At a recent meeting the question of "Municipal Ownership of Public Utilities" was discussed by A. E. Venness, who drew favorable conclusions from British experiences. At the same meeting President A. H. Bullard, of the Board of Fire Commissioners, spoke on "The Importance of a Fire Department."

International Congress on Tuberculosis.—The International Congress on Tuberculosis will be held from September 12 to October 21, 1908, in Washington, D. C. It will be divided into seven sections—pathology and bacteriology, over which Dr. William H. Welch of the Johns Hopkins Hospital will preside; clinical study of tuberculosis, presided over by Dr. Vincent Y. Bowditch of Boston; surgery and orthopedics, Dr. Charles H. Mayo of Rochester, Minn., president; tuberculosis in children, under the presidency of Dr. Abraham Jacobi of New York City; hygienic, social, industrial and economic aspects of tuberculosis, Mr. Edward T. Devine of New York City, president; State and municipal control of tuberculosis, under the presidency of Surgeon General Walter Wyman of Washington, of the United States Public

Health and Marine Hospital Service, and tuberculosis in animals and its relation to man, Dr. Leonard Pearson of Philadelphia, president. The committee has announced the offer of three cash prizes of \$1,000 each, the first to be given for the best evidence of effective work in the prevention or relief of tuberculosis done by any voluntary association since the last international congress in 1905; the second to be given for the best exhibit of a sanitarium for the treatment of tuberculosis among the working classes, and the third is offered for the best exhibit of a furnished home for wage-earners. Many prominent sanitarians of Europe will attend the meeting and deliver lectures.

New York Charity Organization Society.—The twenty-fifth anniversary of the foundation of the Society was celebrated at a convention in Carnegie Hall, November 19, with President Robert W. De Forest in the chair. The chief speaker of the evening was Governor Hughes, who explained what the government might be expected to do and what was better left to private effort. The operation of the tenement house law under which 1,000,000 people had been provided with comfortable homes, was referred to as a notable example of proper governmental activity. Mayor McClellan spoke of the founding of the Provident Loan by the Society. Dr. Emil Munsterberg, head of the public charities in Berlin, who came to New York especially to attend the convention, presented the Society with a complete edition of the reports of the annual meetings of the German National Charities Society.

Municipal Art Society of New York.—The seventh annual exhibition of the Society will take place in March, 1908. The scope of the exhibition will include proposed or completed schemes in decorative painting and sculpture, landscape gardening, drawings or photographs of municipal architecture of a decorative or monumental character, civic centers and improvements in American and European cities, fountains, stained glass, mosaics, models of work executed in stone, wood, bronze or wrought iron, street fixtures, bridges, maps of proposed parkways, park fixtures, window boxes, and similar objects which illustrate phases of municipal improvement. Works particularly bearing upon New York will be desired, but municipal art of any section will be the purpose of the exhibition. The object of this exhibition is to show not only works of art which are applicable to municipal use, but also to indicate the advance in municipal art during the past year as shown in work which has been executed. Persons interested may address William Walton, Secretary, 119 East Nineteenth Street.

Inland Waterways Convention.—The conference, the object of which is to promote the development of inland waterways from Cape Cod to the Gulf, opened November 19 at Philadelphia, Pa. General H. H. Bingham, of Philadelphia, presided. Addresses were made by engineers and others describing the work necessary to be done in a dozen or more localities along the coast.

Ohio Valley Improvement Association.—Two hundred delegates from Pennsylvania, Ohio, Indiana, Illinois, West Virginia and Kentucky, representing every town of considerable size on the Ohio river, met at Wheeling, W. Va., November 14. The immediate object of the convention is to secure a nine-foot stage of water. The election of officers resulted in the selection of John L. Vance as president and J. F. Ellison secretary.

Calendar of Meetings

November 25-27.

National Drainage Association.—Annual congress, Johns Hopkins University, Baltimore, Md.—A. G. Bernard, Chairman, Executive Committee, 1420 New York avenue, Washington, D. C.

December 3-6.

American Society of Mechanical Engineers.—Fifty-fourth annual meeting at New York City.—Calvin W. Rice, 29 West Thirty-ninth street, New York City, Secretary.

December 4-6.

National Association of Manufacturers of Sand Lime Products.—Convention, Chittenden Hotel, Columbus, O.—Harry de Joannis, Secretary, 45 Plymouth Court, Chicago, Ill.

December 5-7.

Society for the Promotion of Industrial Education.—Convention, Chicago, Ill.—C. R. Richards, Secretary, Columbia University, New York City.

December 13.

American Institute of Electrical Engineers.—223rd Meeting, Auditorium, Engineers' Building, 33 West Thirty-ninth street, New York City.—R. W. Pope, Secretary.

December 16-17.

National Civic Federation.—Annual meeting, Assembly Room, Park Avenue Hotel, New York City.—Edward A. Moffett, Secretary, 281 Fourth avenue, New York City.

December 17-21.

Cement Products Exhibition Company.—First annual cement show, Coliseum, Chicago, Ill.—L. L. Fest, Manager, Michigan avenue and 13th street, Chicago, Ill.

December 26.

International Sanitary Convention of American Republics.—Third international meeting, Mexico City.—Surgeon General Walter Wyman, Chairman International Sanitary Bureau, Public Health and Marine Hospital Service, Washington, D. C.

January 20-25.

National Association of Cement Users.—Fourth annual convention at Buffalo, N. Y.—W. W. Curtis, 585 Caxton Bldg., Chicago, Secretary; Dai H. Lewis, 760 Main street, Buffalo, N. Y., Convention Manager.

January 22-23.

Iowa Brick and Tile Association.—Twenty-seventh annual convention, Des Moines, Iowa.—C. B. Platt, Secretary, Van Meter, Iowa.

February 3-4.

American Ceramic Society.—Twenty-second national convention, Hartman Hotel, Columbus, O.—Theo. A. Randall, Secretary, Columbus, O.

February 3-4.

National Paving Brick Manufacturers' Association.—Southern Hotel, Columbus, O.—Theo. A. Randall, Columbus, O.

March.

Municipal Art Society of New York.—Seventh annual exhibition at the Galleries of the National Arts Club, Gramercy Park, New York City.—William Walton Secretary, 119 East 19th street, New York City.

PERSONALS

ASHLEY, CHARLES S., Mayor of New Bedford, Mass., who has filled the office for nearly a score of years with the exception of one term, has announced his withdrawal as a candidate for re-election on account of pressure of personal business.

BINGHAM, ROBERT W., appointed Mayor of Louisville, Ky., by Governor Beckham, and who served until the election of his successor, was presented with a gold watch, chain and locket by the men appointed to office by him, in token of their esteem and appreciation. Judge Humphrey made the presentation speech.

BRAILEY, JAMES S., who was elected with no opposition to succeed himself as Mayor of Wauseon, O., has created quite a sensation by working with street laborers on the \$33,000 paving contract. Mr. Brailey had not done any manual labor in over twenty-five years. He started on election morning with a pick and has since been seen in all stages of the work.

BUDD, J. W., former City Engineer of Des Moines, Ia., has opened an office for private practice in that city.

BULLITT, W. MARSHALL, has tendered his resignation as member of the Water Com-

mission of Louisville, Ky., to which he was appointed by Mayor Bingham. Mr. Bullitt says he had some doubt about the legality of his holding two positions, and after being appointed on the Board of Public Safety he resigned as member of the Commission.

CARR, HON. J. D., Mayor of Newton, Mass., who was recently elected as member of the Legislature, has tendered his resignation, to take effect December 1.

CROWELL, FOSTER, has been named by Mayor George B. McClellan to be Street Cleaning Commissioner of New York City, to succeed Dr. Walter Benschel, who will resume his former place as Sanitary Superintendent of the Board of Health.

EDGERTON, HIRAM H., President of the Council and Mayor-elect of Rochester, recently acted as Mayor during the absence of Mayor James G. Cutler, who visited New York City, which it is thought was for the purpose of conferring with the officials of the New York Central Railroad in regard to bettering trolley conditions in Rochester.

ELDER, J. L., has been elected County Surveyor of Cambria County, Pa.

GARVEN, PIERRE P., Mayor of Bayonne, N. J., has returned from a trip to Richmond and Norfolk, Va., and Washington, D. C.

GODEFFROY, RICHARD, New York City, has been elected President of the American Dittler Sewage Disposal Company, 1123 Broadway, New York City. Augustus C. Hepp, Chief Engineer, has been elected Vice-President. William H. Schladitz, Mechanical Engineer, has been elected Secretary and Treasurer. These appointments have been made because the company finds that it will better meet the interests and wishes of its clients by having engineers on the Board of Directors.

HODGSON, J. B., has been appointed City Engineer of Joplin, Mo.

HOLMES, GLENN D., has been appointed Chief Engineer of the Intercepting Sewer Board of Syracuse, N. Y.

JONES, R. HENRY, Chairman of the Water Committee of the Board of Control of Norfolk, Va., has been making a trip of inspection of other cities, not being satisfied with the data available at home in regard to meters. He was accompanied by Mr. T. B. Dornin, Engineer in charge of the Water Works, and it was proposed to visit Washington, Cleveland, Columbus and other cities.

KIERSTED, ROBERT, Chief of the Fire Department of Newark, N. J., on account of friction, has tendered his resignation and asked for leave of absence until December 31, when he requests that it take effect. The Fire Commissioners have granted the leave of absence, but the resignation was laid on the table.

KNIGHT, A. D., and W. C. Steele, Street Superintendent and City Engineer respectively of Ocean Park, Cal., have resigned; the former to manage an orange grove, the latter to take up private engineering practice.

LEE, HENRY, Mayor of Bridgeport, Conn., just installed, has announced the following appointments: Public Works Director, C. P. A. Biltz (to succeed himself); Fire Commissioners, A. H. Bullard (to succeed himself), Frederick A. Strong (to succeed himself); Board of Relief, William A. Lewis (to succeed himself), Charles J. Byrne (to succeed George H. Wood); Building Commissioner, Charles T. Beardsley, Jr. (to succeed Albert L. McGrath); Police Commissioner, George E. Hill (to succeed himself).

MADDUX, CHARLES J., has been elected County Surveyor of Montgomery County, Md.

MARTIN, JAMES B., Mayor-elect of New Haven, Conn., recently visited Mayor Lee at Bridgeport to confer with him in regard to several important changes proposed to be made in the charter of New Haven. Mayor Lee is familiar with every charter of Connecticut cities and an expert on city charters through his work as Chairman of the Legislative Committee on Cities and Boroughs of the General Assembly of 1905, and before Mayor Martin takes office he will have another conference with Mayor Lee.

MAXWELL, CHARLES, Chief of Police of Atlantic City, N. J., and Mayor of the city during the eighties, died recently after a lingering illness. He was much in public life and seven years ago was made House Sergeant in the Police Department, rose to Captain, and two years ago, on the death of Chief Harry Eldridge, was made head of the Department. He was fifty years of age.

MELAT, H. B., was recently elected County Surveyor of Vernango County, Pa.

MILLER, JUDGE ALEXANDER LAWTON, Macon, Ga., who was defeated for Mayor two years ago, has been elected Chief Executive of the city over John T. Moore and on December 17 will relieve Mayor Bridges Smith.

MOON, CHARLES H., has been elected County Surveyor of Bucks County, Pa.

MORLEDGE, BAILEY, has recently been elected City Engineer of Newport, O.

MYHLERTZ, FREDERICK G., Engineer of Construction, Bureau of Building Inspection, Philadelphia, has tendered his resignation, to take effect on December 1. He will associate himself with Scott, Mitchell & Co., of Philadelphia, bankers and fiscal agents of the Seaboard Portland Cement Co., who are building a plant at Catskill, N. Y.

PURTELL, S. M., State Fire Marshal of Michigan, has appointed Josias Edwin Florin of Menominee as Deputy Fire Marshal, at a salary of \$1,800 per annum.

RATHER, R. S., Mayor of Huntsville, Texas, while brooding over business worries and ill-health recently, shot himself through the heart and expired in a few moments. He was fifty-three years of age and prominently identified with the business interests of the town.

REED, JEFFERSON DAVIS, Mayor of Portsmouth, Va., is to be married to the daughter of Dr. and Mrs. Henry Marchand Shaw at Shawboro, N. C., on November 30.

SCOTT, H. W., Principal Assistant City Engineer of Seattle, Wash., died recently.

SMITH, HENRY, has been appointed by Mayor McClellan to be President of the Park Board of New York City, to succeed Samuel Parsons, who will resume as Landscape Architect to the Department of Parks.

STEVENS, CHESTER, and Harry Keerl will open an office for civil engineering work at Mason City, Ia.

STEVENS, DR. EDMUND H., has resigned from the Water Board of Cambridge, Mass. Dr. A. W. Dudley has been appointed as his successor.

THOMPSON, AARON R., former Canal Superintendent and Commissioner of Public Works of Syracuse, N. Y., died recently, aged fifty-eight.

WRINN, JAMES, Chief of Police of New Haven, Conn., has been retired on a pension, and Detective Captain Henry D. Cowles has been appointed by Mayor Studley to succeed him. Ex-Chief Wrinn was the recipient of many tokens of esteem from members of the Department and friends.

YOUNG, FREDERICK, was recently elected County Surveyor of Luzerne County, Pa.

THE WEEK'S CONTRACT NEWS

Relating to Municipal and Public Work—Street Improvements—Paving, Road Making, Cleaning and Sprinkling—Sewerage, Water Supply and Public Lighting—Fire Equipment and Supplies—Buildings, Bridges and Street Railways—Sanitation, Garbage and Waste Disposal—Police, Parks and Miscellaneous—Proposals and Awards

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it all. Our sources of information are believed to be reliable, but we can not guarantee the correctness of all items. Parties in charge of proposed work are requested to send us information concerning it as early as possible; also corrections of any errors discovered.

BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
Street Improvements				
Iowa	Cedar Rapids	November 28	Paving certain streets with brick on concrete base	T. R. Warriner, City Engineer.
Indiana	Logansport	November 29, noon	Constructing gravel road, line bet. Cass and Carroll Cos.	George W. Gann, Co. Auditor.
Minnesota	St. Peter	November 29	Grading and graveling state road in 3 towns	A. H. Freeman, County Auditor.
Missouri	Kansas City	November 30, 11 A.M.	Constructing asphalt pavement, portions 24 streets	E. A. Harper, City Engineer.
Indiana	Greencastle	November 30, 2 P.M.	Improving 16,372 ft. macadam road, Jackson Twp.	C. C. Hurst, County Auditor.
Ohio	Lockland	November 30	Constructing artificial stone sidewalks on Patterson St.	A. H. Rolef, Village Clerk.
Indiana	Columbus	December 2, 10 A.M.	Constructing 7,942 ft. gravel road in Clifty township	John M. Davis, Co. Auditor.
Alabama	Montgomery	December 2, noon	Paving sidewalks, McDonough St., with hexagon tile	R. S. Williams, City Treasurer.
Indiana	Sullivan	December 2, noon	Constructing 15,400 ft. gravel road, Haddon township	E. E. Russell, County Auditor.
Indiana	Lebanon	December 2, 1 P.M.	Constructing 6 gravel roads; total length, 66,950 ft.	B. F. Simmons, County Auditor.
Indiana	Salem	December 2, 1:30 P.M.	Bldg. gravel road 11,680 ft. long; cost, \$10,211; Washington twp.	Sam G. Ellis, Co. Auditor.
Indiana	Martinsville	December 2, 2 P.M.	Constructing 8,165 ft. gravel road, Jones Rd., Jackson twp.	E. E. Thornburg, Co. Auditor.
Ohio	Steubenville	December 2	Constructing cement retaining wall along Fisher's Run	S. B. Curfman, City Engineer.
Indiana	Monticello	December 3, 10 A.M.	Building stone macadam road; also Kelley gravel road	J. L. Ackerman, Co. Auditor.
Florida	Palatka	December 3, noon	Paving 22,805 sq. yds. brick; 9,857 lin. ft. granite or concrete	J. E. Craig, City Engineer.
Pennsylvania	McKeesport	December 3, 4 P.M.	Grading, curbing, brick paving, 400 lin. ft., Scott Street	C. E. Soles, City Controller.
Ohio	Marysville	December 3	Constructing curbs, retaining walls, brick paving, etc., 6th St.	J. C. Kennedy, Village Engineer.
Indiana	Portland	December 3	Grading, draining, graveling 2 rds., 10,333 and 5,280 ft. Noble township	W. Lea Smith, County Auditor.
Minnesota	Bemidji	December 3	Constructing a county road	John Hillmann, County Auditor.
Indiana	Logansport	December 4, 10 A.M.	Constructing gravel roads Nos. 1, 2 and 3; also one Wash. twp.	Geo. W. Cann, Co. Auditor.
Iowa	Des Moines	December 4, 11 A.M.	Paving 3,026 sq. yds. vit. block, 962 asphalt, 3,802 lin. ft. curb, 7,500 sq. yds. wood block, several streets	W. W. Wise, Bd. Pub. Works.
New York	Brooklyn	December 4, 11 A.M.	Asphalt on concrete, grading, etc., various streets	Bird S. Coler, Boro Pres.
Indiana	Indianapolis	December 4, noon	Constructing Bugh macadam road, 15,810 ft. long, Wash. twp.	L. W. Daugherty, Co. Auditor.
North Dakota	Fargo	December 4, noon	Paving or replanking Front St. bridge and approaches	Arthur G. Lewis, Co. Auditor.
Indiana	Danville	December 5, 10 A.M.	Constructing 1 1/2 miles gravel road, Marion township	David D. Mills, Co. Auditor.
Ohio	Toledo	December 5	Laying and repair'g all delinquent walks and driveways for year	Reynold Voit, Sec'y Bd. Pub. Serv.
Utah	Salt Lake City	December 6, 8 P.M.	Grading, paving and curbing First South St., inc. 60,000 cu. yds. grading, 17,000 lin. ft. curb, 41,000 sq. yds. asphalt	Louis C. Kelsey, City Engineer.
Indiana	Peru	December 7, noon	Grading, draining, paving, etc., 23 1/2 miles gravel roads	Charles Griswold, Co. Auditor.
Indiana	Lebanon	December 10, 1 P.M.	Constructing gravel road between Boone and Hamilton Counties	B. F. Simmons, County Auditor.
New York	Ft. H. G. Wright	Dec. 11, 11:30 A.M.	Constructing macadam roads, sidewalks and grading	Capt. Wm. E. Horton, Q. M.
New Jersey	Flemington	December 12, 10 A.M.	Macadamizing 34,200 lin. ft. road	Grant Davis, County Engineer.
Indiana	Anderson	December 12, 2 P.M.	Constructing 9,140 ft. gravel road	James Kinnard, County Auditor.
Indiana	Lebanon	December 14, 1 P.M.	Constructing gravel road Co. line, bet. Boone and Hamilton Cos.	Boone County Commissioners.
Ohio	Steubenville	December 16	Paving Market Street	T. W. Vance, Clk. Bd. Pub. Ser.
Louisiana	Providence	December 17, noon	Paving and curbing four miles of sidewalks	T. J. Powell, Mayor.
Tennessee	Payetteville	January 2	Constructing concrete pavements	W. G. Kirkpatrick, Jackson, Miss., Civil Engineer.
Montana	Billings	February 4, 5 P.M.	Constructing 86,653 sq. yds. gravel macadam; 3,000 lin. ft. sewer, complete, etc., 17,400 lin. ft. gutter, complete	J. D. Matheson, City Clerk.
Montana	Billings	February 4, 8 P.M.	Constructing 6,305 sq. yds. shale brick pavement	J. D. Matheson, City Clerk.
Water Supply				
Alabama	Fort Morgan	November 28, 2 P.M.	Erecting 150,000-gal. steel tank on 75-ft. trestle	Capt. L. F. Garrard, Q. M.
Illinois	Bloomington	November 28	Furnishing 4,000 ft. c. i. water main	C. F. Fauntz, City Engineer.
Ohio	Cincinnati	November 29	Furn. and laying c. i. pipe, castings, etc., Reading and Dale roads	M. J. Keefe, Clk. Bd. Pub. Serv.
Idaho	Shelley	December 1	Constructing water works, to cost \$6,500	N. N. Holm, Engineer.
Georgia	Millen	December 1	Constructing water and electric light systems	H. O. Bell, Mayor.
Arizona	Phoenix	December 2, 2 P.M.	Addition to water system at Phoenix Indian School	C. W. Goodman, Superintendent.
Arizona	Phoenix	December 2, 3:30 P.M.	Labor and material for water works improvements	Robert A. Craig, Superintendent.
North Dakota	Fargo	December 2, 5 P.M.	Constructing 2,175 ft. 6-in. pipe, etc.; also 6-in. water connections	N. C. Morgan, City Auditor.
Pennsylvania	Hollidaysburg	December 3, noon	Furn. 3 1/2 miles 4-in. c. i. or spiral riveted, dip-coated iron pipe	W. M. Brown, Sec'y Dirs. Poor.
Ohio	Minerva	December 4, noon	Furnishing 150 h. p. boiler, 150 lbs. pressure	L. E. Weber, Sec'y Bd. Pub. Aff's.
Pennsylvania	Cambridge Sp'gs	Dec. 12, 7:30 P.M.	Constructing mechanical filter plant	J. F. Himebaugh, Burgess.
North Dakota	Grand Forks	December 15	Extending water mains on several streets	W. V. O'Connor, City Auditor.
New Jersey	Camden	December 17, 8 P.M.	Improving present artesian water supply system and adding to 17,000,000-gal. supply at least 5,000,000-gals. daily	Jas. Potter, Chm. Water Com.
Maine	Norway	December 31	Constructing 1,000,000 gal. reservoir	S. D. Andrews, Pres. Water Co.
Arizona	Tucson	January 8, 8 P.M.	Furnishing material and constructing water works system	Frank S. Treat, City Clerk.
Nebraska	Wood River	January 15	Constructing water works and electric light plant; cost, \$17,000	D. D. O'Kane, Village Clerk.
Sewerage				
New York	White Plains	Nov'ber 27, 1:30 P.M.	Constructing the Bronx Valley Sewer	Frank N. Glover, Secretary.
Virginia	Norfolk	November 28, noon	Constructing 1,000 ft. 10-in. t. c. pipe, 24,000 ft. 8-in., 24,000 ft. 4-in., 50 manholes; 35 flush tanks, etc.	W. T. Brooke, City Engineer.
Ohio	Warren	November 28	Constructing 260 1/2 rods 18 to 6-in. pipe; 1,829 rods 4-in., etc.	Bd. Infirmary Directors.
Illinois	Bloomington	November 29	Constructing 5,205 ft. 12-18-in. pipe sewer	Chas. F. Fauntz, City Engineer.
Michigan	Cadillac	December 2, noon	Building sewage purification works and pumping station	George Johnson, Clk. Bd. Pub. Wks.
North Dakota	Fargo	December 2, 5 P.M.	Making sewer and water connections, 6-in. pipe, N. Pac. Ave.	N. C. Morgan, City Auditor.
North Dakota	Valley City	December 2	Constructing sewers in two alleys	H. F. Halverson, City Auditor.
Ohio	Akron	December 3, noon	Constructing sewer in Bloomfield Ave., Portage Path to Exchange Street	Chas. H. Watters, Sec'y B. P. S.
New York	Auburn	December 3, 8 P.M.	Construct'g Fourth, Fifth, Sixth, and Seventh Ward sewers and disposal plant, inc. 37,150 ft. 8-20 in. pipe, etc.	J. Walter Ackerman, City Eng.
Tennessee	Chattanooga	December 3	Constructing 1 1/2 miles sanitary main sewers; estimate, \$28,000	Robert Hooke, City Engineer.
Iowa	Des Moines	December 4, 11 A.M.	Constructing 968 ft. 12-in. vit. pipe sewer, etc.	W. W. Wise, Bd. Pub. Wks.
Ohio	Dayton	December 4	Constructing sanitary sewers Dist. No. 3, inc. 70,000 ft. 6-15-in. vit. pipe; 68,250 ft. trench and backfill, 6 to 28 ft. deep; 80 lamp holes, etc.; repaving 1,500 sq. yds. brick; 100 asphalt; 6,000 lin. ft. boulder, etc.	
Pennsylvania	McKeesport	December 5, 4 P.M.	Constructing 15-in. t. c. sewer in Jim Crow alley, etc.	Robert Kline, City Engineer.
Utah	Salt Lake City	December 6, 8 P.M.	Pipe sewers in Extension No. 101	C. E. Soles, City Controller.
Georgia	Forsyth	December 6	Constructing \$15,000 sewerage system	L. C. Kelsey, City Engineer.
New York	Marcy	December 7, 7 P.M.	Constructing 1,500 ft. vit. pipe sewer in Stittville Village	H. F. Wilder, City Clerk.
				W. G. Stone, Mann Bldg., Utica, C.E.

Sewerage—Continued.

Ohio.....	Orrville.....	December 9, noon...	Constructing \$70,000 sewer system and disposal plant, inc. 75,000 ft. 8 to 15-in. pipe, 60 manholes, etc.	S. W. Jackson, Village Clerk.
Ohio.....	Steubenville.....	December 9.....	Constructing sewer in Market St. from Liberty.....	T. W. Vance, Clk. Bd. Pub. Service.
Kentucky.....	Louisville.....	December 17, noon...	Construction Sec. B. outfall sewer; 3,322 ft., 15' 2" x 15' 6"; 1,820 ft., 14' 5" x 15'; 970 ft., 13' 11" x 14' 3", inc. 6,143 lin. ft., exc. 22 to 42 ft. deep; 17,000 cu. yds. concrete; 1,200,000 lbs. rein. steel bars; 21,000 bbls. Portland cement, etc.	J. B. F. Breed, Chief Engineer. Frank Neikirk, City Auditor. W. S. Kremer, Civil Eng'r.
North Dakota..	Towner.....	December 18.....	Extending sewer system.....	Thomas H. James, City Engineer.
Iowa.....	Wapello.....	December 19.....	Constructing Van Buren St. sewer; cost, \$6,000.....	J. F. Case, Chief Engineer.
California.....	Santa Monica.....	December 21.....	Constructing septic tank, also pier 1,600 ft. long, to carry outfall pipe from tank to ocean; also plans, etc.	J. D. Matheson, City Clerk.
Philippine Isds.	Manila.....	January 19, noon...	Twelve pumps and motors for new sewer system.....	
Montana.....	Billings.....	February 4, 5 P.M.	Sewer, 3,000 lin. ft., 12 manholes, 15 catch basins, etc.	

Public Buildings

Pennsylvania..	Pottsville.....	November 29, 10 A.M.	Repairing County Hospital.....	Chas. T. Straughton, Co. Controller.
Indiana.....	New Albany.....	November 29, noon...	Remodeling the County jail.....	County Commissioners.
Indiana.....	Marion.....	November 29, 3 P.M.	Constructing complete U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Pennsylvania..	Oakmont.....	November 29.....	Constructing school in Penn Township.....	E. H. Taylor, Secretary.
Illinois.....	Chicago.....	November 30, 11 A.M.	Erecting 2-story and base, brick and stone bath house.....	John J. Hanberg, Com'r Pub. Works.
Kansas.....	Topeka.....	November 30, 2 P.M.	Erecting new custodial bldg., School for Feeble Minded, \$60,000.	State Board of Control.
Arkansas.....	Fort Smith.....	December 1.....	Erecting \$65,000 school.....	A. Klingsmith, Architect.
Ontario.....	Kincardia.....	December 1.....	Remodeling Central School; separate or as a whole.....	N. R. Darrach, St. Thomas, Arch.
Nevada.....	Ely.....	December 2, 11 A.M.	Constructing County Court House and jail.....	J. F. Miles, County Clerk.
Illinois.....	North Chicago.....	December 2, noon...	Erecting Commanding Officer's house, 6 officer's houses, etc.	Commander, Naval Training Sta'n
North Dakota..	Devil's Lake.....	December 2, 3 P.M.	Building foundations, etc., for Federal Building.....	James Knox Taylor, Wash., D. C.
Massachusetts..	Newtonville.....	December 2.....	Erecting technical high school; separate bldg.	French & Hubbard, Boston, Eng'rs.
Montana.....	Hayre.....	December 2.....	Erecting a County Poor House near Hayre.....	W. R. Leet, Chinook, Co. Clerk.
Pennsylvania..	Homestead.....	December 2.....	Erecting bldg. at garbage furnace, concrete base, steel frame.....	A. H. Trautman, City Eng'r.
Washington.....	Tacoma.....	December 2.....	Erecting steel frame conservatory in Wright Park.....	I. Jay Knapp, Architect.
Arizona.....	Tempe.....	December 3, noon...	Erecting science building for normal school; also gymnasium and auditorium building; cost, \$60,000.....	Alfred J. Peters, Sec'y Bd. Educat'n.
Missouri.....	Nevada.....	December 3, 3 P.M.	Constructing complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Pennsylvania..	Allentown.....	December 3, 4 P.M.	Constructing addition to County jail.....	County Commissioners.
Pennsylvania..	Allegheny.....	December 3.....	Erecting 2-story school with basement and sub., of brick, terra cotta and concrete, 176 x 99.6 ft.; cost, \$175,000.....	C. M. Barthberger & Son, Archs.
Ohio.....	Columbus.....	December 4.....	Enlarging and repairing West Side Market House.....	Edw. F. McGuire, Sec'y B. P. S.
Pennsylvania..	Ashland.....	December 4.....	Erecting \$100,000 Nurses' Home, adjacent to State hospital.....	E. C. Wagner, Girardville, Sec'y
Maine.....	Waldoboro.....	December 5, 3 P.M.	Erecting extension to Federal Building.....	James Knox Taylor, Wash., D. C.
Texas.....	Beaumont.....	December 6.....	Erecting a ward school in North End.....	Board of School Trustees.
Ontario.....	Simcoe.....	December 6.....	Erecting a public building.....	Fred. Gelinas, Sec'y Dept. Pub. Wks.
New York.....	Rensselaer.....	December 7, 5 P.M.	Erecting Didymus Thomas Library Building.....	Walter G. Frank, Utica, Arch.
Tennessee.....	Pulaski.....	December 9, noon...	Erecting 2-story and base, brick and stone fireproof Court House.....	B. B. Smith, Montgomery, Ala., Arch
Illinois.....	Chicago.....	December 9, 2 P.M.	Constructing new armory for Seventh Reg't I. N. G.	W. C. Zimmerman, State Arch.
California.....	Berkeley.....	December 9, 7:45 P.M.	Constructing \$10,000 Town Hall, of concrete and steel.....	Bakewell & Brown, San Fran., Archs.
Ohio.....	Cincinnati.....	December 9.....	Erecting high school; bids separate or whole.....	Dr. J. M. Withrow, Bd. Educ.
Pennsylvania..	Warrensville.....	December 9.....	Erecting Infirmary and ext. to dining room; State Asy. for Ins.	A. A. Ritcher, Reading, Arch.
Illinois.....	Carbondale.....	December 10, noon...	Erecting model school building So. Ill. State Normal Univ.	Hugh Lauder, Sec'y Bd. Trustees.
Texas.....	Alpine.....	December 10.....	Erecting 2-story brick, stone and concrete block school.....	H. T. Phelps, San Antonio, Arch.
Tennessee.....	Chattanooga.....	December 10.....	Erecting new City Hall, to cost about \$190,000.....	R. H. Hunt, Architect.
Dist. of Col'bia	Washington.....	December 11, noon...	Furn. sheet copper, 6,250 sheets 24 x 96 ins., or 100,000 sq. ft.	Elliott Woods, Supt. U. S. Capitol.
Arizona.....	Whipple Barracks.....	December 12, 11 A.M.	Erecting, plumbing, heating, electric wiring, hospital.....	Capt. Chas. C. Walcott, Jr., Q. M.
Indiana.....	Terre Haute.....	December 14.....	Erecting County jails; \$125,000 available.....	County Commissioners.
Alabama.....	Auburn.....	December 15.....	Erecting \$30,000 library for Polytechnic Institute.....	C. C. Thach, President, Inst.
Oklahoma.....	Pawnee.....	December 17, 2 P.M.	Constructing dormitory at Pawnee Indian School.....	Geo. W. Nellis, Superintendent.
Michigan.....	Detroit.....	December 17, 3 P.M.	Erecting, complete, extension to Federal Building.....	James Knox Taylor, Wash., D. C.
Florida.....	Ocala.....	December 19, 3 P.M.	Erecting, complete, Federal Building.....	James Knox Taylor, Wash., D. C.
Michigan.....	Ann Arbor.....	December 23, 3 P.M.	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Pennsylvania..	Lancaster.....	December 30, 3 P.M.	Erecting, complete, extension to U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Indiana.....	South Bend.....	January 2, 3 P.M.	Erecting extension and remodeling U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Michigan.....	Flint.....	January 2.....	Constructing a City Hall; cost 65,000 or \$75,000, except heating, etc.	D. E. Newcome, City Clerk.
New Mexico.....	Albuquerque.....	January 3, 3 P.M.	Constructing, inc. plumbing, heating, etc., U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Kansas.....	Wichita.....	January 6.....	Erecting, complete, extension to Federal Building.....	James Knox Taylor, Wash., D. C.
Michigan.....	Coopersville.....	January 6.....	Constructing a \$16,000 school.....	F. E. Payne, Sec'y Bd. Educat'n
Minnesota.....	Slayton.....	January 7, 8 P.M.	Erecting brick addition to school, Dist. No. 52.....	B. H. Whitney, Clk. School Bd.
Georgia.....	Cairo.....	February 1.....	Erecting \$40,000 County Court House; also \$13,000 jail.....	Alex. Blair, Macon, Architect.

Bridges

Pennsylvania..	Pottsville.....	November 29, 10 A.M.	Constructing bridge at Auburn; also repairing three.....	Chas. T. Straughton, Co. Controller
Ohio.....	Cincinnati.....	November 29, noon...	Repairing suspension bridge over river, Whiteriver township.....	Fred Drehs, County Clerk.
Washington.....	Spokane.....	November 29, 2 P.M.	Erecting bridge over Rock Creek on Hoxie Road.....	County Commissioners.
Oregon.....	Portland.....	November 29, 4 P.M.	Erecting rein. concrete bridge over Sullivan's Gulch, E. 28th St.	Douglas W. Taylor, City Eng.
Pennsylvania..	West Bethlehem.....	November 29.....	Erecting rein. concrete bridge over Broad St., 60 ft. wide, 5 spans 2 of 75 ft., 2 of 90 ft., one 100 ft.	L. A. Francisco, Easton, Co. Eng'r.
Kansas.....	Emporia.....	November 30, noon...	Constructing stone abutments for two bridges.....	Jno. E. Martin, County Clerk.
Montana.....	Fort Benton.....	December 2.....	Constructing two bridges over Highwood Creek nr. Bucklands.....	W. R. Leet, County Clerk.
Iowa.....	Council Bluffs.....	December 3, 9 A.M.	Constructing all county bridges from April 1.....	W. C. Cheyne, County Aud.
Indiana.....	Paoli.....	December 3, 2 P.M.	Constructing new floor for Finley bridge over Lost River.....	County Commissioners.
Indiana.....	Newport.....	December 4, 10 A.M.	Erecting superstructure of bridge over Wabash River.....	County Commissioners.
Indiana.....	Muncie.....	December 4, 10 A.M.	Erecting 2 bridges over Mississinewa and one over White River.....	Delaware County Commissioners.
North Dakota..	Fargo.....	December 4, noon...	Repairing bridge, Barnes twp.; also replanking bridge.....	Arthur G. Lewis, County Auditor.
Wisconsin.....	River Falls.....	December 5.....	Erecting steel truss bridge over Kinnickinnic River at Cedar St., 140 ft. long, concrete floor, 20 ft. wide, 5-ft. walks, abutments.	Allen P. Weld, City Clerk.
Minnesota.....	Jackson.....	December 10.....	Erecting 100 ft. steel bridge and approaches.....	P. D. McKellar, Co. Auditor.
Hawaii.....	Wailuku, Maui Co.....	December 11, 2 P.M.	Three steel bridges.....	W. F. Kane, County Clerk.
Ohio.....	Norwood.....	December 14.....	Erecting substructure of viaduct over B. & O. S. W. Ry.....	Jas. A. Stewart, Cincinnati, C. E.
Spain.....	Madrid.....	December 14.....	Erecting 14-meter wide bridge over Manzanares.....	Public Works Department.
Pennsylvania..	Philadelphia.....	December 17, noon...	Constructing masonry trestle and embankment, 3 contracts; bridges; temporary engine yard, etc.....	W. Hunter, County Engineer.
Indiana.....	La Fayette.....	December 18, 10 A.M.	Constructing bridge near Granville.....	John Foresman, Co. Auditor.
China.....	Canton.....	December 31.....	Constructing steel cantilever and girder bridge, 1,102 ft. long, in the Front Reach, Canton.....	Canton River Bridge Co.
South Dakota..	Salem.....	January 7.....	Building all bridges in McCook County during coming year.....	C. J. Black, Co. Auditor.
North Carolina.	Castle Haynes.....	January 7.....	Constructing steel bridge, 400 ft., inc. draw span and foundations, 16 ft. roadway, carry 15-ton road roller; water 32 feet deep.....	D. McEachern, Wilmington.
Missouri.....	St. Charles.....	February 13.....	Erecting Cuivre River bridge at Old Monroe; cost, \$8,000.....	County Commissioners.

Lighting and Electricity

Illinois.....	Princeton.....	November 29.....	Sale of city electric lighting plant and system.....	Mayor Bryant.
Quebec.....	Montreal.....	December 1.....	Illuminating and heating gas; also electric lighting and heat.....	Fire and Light Com., Council.
Georgia.....	Millen.....	December 1.....	Constructing electric light and water systems.....	J. B. McCrary & Co., Atlanta, Eng.
Louisiana.....	Lecompte.....	December 3.....	Plans, etc., for complete electric lighting system.....	City Council.
Ohio.....	Newburgh.....	December 5.....	Furnishing, lighting, extinguishing and keeping in repair, inc. furn. gas, gasoline, etc., 140 st. lights for one year.....	Wm. H. Jentzen, Clk., Bd. Pub. Serv.
Quebec.....	Montreal.....	December 16.....	Supplying electricity and gas for lighting, heating, etc.....	L. O. David, City Clerk.
Indiana.....	Washington.....	December 16.....	Purchase city's stock in Washington Light and Water Co.....	Robert Russell, Mayor.
Indiana.....	La Fayette.....	December 20.....	Lighting the city for 10 years, from September, 1908.....	R. H. McGrath, Pres. Bd. Pub. Wks.
Indian Terr'y..	Red Fork.....	December 20.....	Constructing electric railway and power plant to serve Red Fork, Tulsa, W. Tulsa and Glen Pool; cost of plant, \$100,000.....	J. Robert Burnham, Tulsa, Engineer.
Montana.....	Chinook.....	December 21, 2 P.M.	Constructing an electric light system.....	Mid-continental Traction Co.
India.....	Calcutta.....	December 31.....	Lighting town by electricity, gas, oil or other method; now lighted by 9,300 gas lamps of 24 c.p. and 2,400 c.p. oil lamps.....	John C. Duff, City Clerk.
Nebraska.....	Wood River.....	January 15.....	Constructing \$17,000 electric light and water works plant.....	Municipal Council.

D. D. O. Kane, Village Clerk.

Miscellaneous

Indiana.....	Indianapolis.....	November 29.....	Furn. stationary chem. engine, Cent. Ind. Hos. for Insane.....	Bd. Trus., Hosp. for Insane.
New Mexico.....	Fort Caswell.....	November 30, 11 A.M.	Building creosoted bulkhead.....	L. Cravens, Quartermaster.
New York.....	New York.....	November 30, 11 A.M.	Unloading and delivering ashes furn. by Dept. St. Cleaning.....	Louis F. Haffen, Boro. Bronx.
Pennsylvania.....	Bloomsburg.....	November 30, noon.....	Constructing Soldiers' Monument.....	A. B. Black, County Clerk.
Mississippi.....	Vicksburg.....	December 2, noon.....	Furnishing County with steam road outfit.....	J. D. Laughlin, Chancery Clerk.
New York.....	Brooklyn.....	December 2, noon.....	Removal of snow and ice from sts. of Brooklyn.....	W. Bensei, Com'r St. Cleaning.
New York.....	New York.....	December 2, noon.....	Removing snow and ice, Manhattan and Bronx.....	W. Bensei, Com'r St. Cleaning.
Ontario.....	Ottawa.....	December 2.....	Bldg. extension to breakwater; pile and concrete revetment wall, etc.....	Fred Gelinas, Dept. Pub. Works.
Ohio.....	Steubenville.....	December 2.....	Constructing cement retaining wall on Fisher's Run.....	T. W. Vance, Clk. Bd. Pub. Serv.
Pennsylvania.....	Reading.....	December 3.....	Disposing of city garbage for a term of years.....	Elmer H. Beard, City Engineer.
Ohio.....	Minerva.....	December 4.....	Furnishing 150-horsepower boiler.....	L. E. Weber, Sec'y Bd. Pub. Serv.
Pennsylvania.....	Altoona.....	December 4.....	Collection and sanitary disposal of garbage, 1, 3, 5 or 10 years.....	Samuel B. Fries, Sec'y Bd. Health.
Dist. of Col'bia.....	Washington.....	Dec. 6, 10:30 A.M.	Furn. pumps, pneumatic tools, hose, repair parts of steam shovels, iron pipe and fittings, etc., 1st. Canal Com'n.....	Col. H. F. Hodges, Gen. Pur. Agent.
Iowa.....	Emmetsburg.....	December 11, 1 P.M.	Constructing work in nine Drainage Districts.....	Sim. R. Stedman, Co. Auditor.
Louisiana.....	New Orleans.....	December 11.....	Thirty-year franchise, beginning June 30, 1912, to construct, maintain and operate electric street railway through several sts., including St. Bernard Ave. and Broad St.....	Chas. R. Kennedy, Comptroller.
Tennessee.....	Nashville.....	December 14, 11 A.M.	Furnishing 1,258,605 ft. B. M. long-leaf yellow pine lumber.....	Maj. Wm. W. Harts, U. S. Eng'rs.
New Jersey.....	Fort Hancock.....	December 17, 2 P.M.	Constructing a garbage crematory.....	Capt. M. N. Falls, Q. M., U. S. A.
Wisconsin.....	Madison.....	December 18, noon.....	Bldg. concrete tunnel from power plant to new Capitol; also wrecking east wing of old Capitol building.....	Low F. Porter, Sec'y Capitol Com'n.
Tennessee.....	Chattanooga.....	January 7.....	Screen wagon service between P.O. and depts. 4 years, rural delivery	W. Scott Raulston, Postmaster.

STREET IMPROVEMENTS

Decatur, Ala.—Council has passed an ordinance providing for the construction of about seven miles of concrete sidewalks on Pon, Oak Canal, Cain, Market and Cherry streets; other contracts will follow, and almost the entire city will be laid with these walks.

Mobile Ala.—Paving contracts Nos. 5, 6 and 7 have been approved and work on them will begin at once. Two of these contracts are on Royal street and the other is on Commerce and Water. The total of the three contracts is 2,000 yards or more.

Fresno, Cal.—The Board of Supervisors of Fresno County has authorized the construction of a public highway, six miles long, to be graded and bridged and to be ready by November 1, 1908.

East Chicago, Ind.—The city proposes to issue \$500,000 bonds for street improvement purposes.—Address City Clerk.

Indianapolis, Ind.—The city officials contemplate the purchase of an asphalt repair plant. City Council refused to make the usual large appropriation for the repair of permanently improved streets for 1908, with the understanding that the city would purchase its own asphalt repair plant in time for next year's work.

Terra Haute, Ind.—The City Comptroller has advertised for bids for the purchase of \$6,345 one to ten-year 5 per cent. paving bonds.

Louisville, Ky.—The report of the Board of Public Works states that Third avenue should be reconstructed from end to end.

Kalamazoo, Mich.—Estimates are being prepared for improving certain streets by paving with asphalt.

St. Clair Heights, Mich.—Council has directed plans to be prepared and estimates made for improving certain streets.

St. Paul, Minn.—The expenditure of \$25,000 will be recommended by the Good Roads Committee for good roads in different parts of the city. The \$25,000 does not include \$7,000 which Council will be asked to allow to complete macadamizing University avenue.

Gloucester City, N. J.—Council has decided to offer for sale \$70,000 street improvement bonds.

Newark, N. J.—The City Engineer and Wilbur A. Howell have completed plans and specifications for improving Clay street; estimated cost, \$85,000.

Perth Amboy, N. J.—The Committee on Streets and Sewers has been authorized to purchase 300 tons of stone for road repairing.

Prospect Park, N. J.—Notice of intention has been passed to grade, curb and gutter the following streets and avenues where not so done: Haledon avenue (east side), from Hopper street to lands of Joseph R. Graham (deceased). North Ninth street, from Haledon avenue to lands of Garrit Planten (deceased).

Wildwood, N. J.—The citizens have voted \$7,000 bonds for street improvements.

Hoosack Falls, N. Y.—The State road to be built in the town will require about one and a half miles of road to connect the State roads from North Hoosick to Hoosick; the State will build only one mile, and a committee has been appointed to confer with the State Engineer to see what can be done toward building the other half mile, in order to have a continuous State road through the town and village from North Hoosick to Hoosick Corners, or the Whitehouse bridge.

Niagara Falls, N. Y.—A resolution has been adopted to ask the Grade Crossings Commission to negotiate with the New York Central and other railroads operating at the North End for the elimination of the north

Main street crossing and the construction of a viaduct there.

Cleveland, O.—The County Commissioners have announced that the following roads will be paved next year: Fischer, Dillie, Canal and Shunpike, Pearl street beyond the city limit, and Independence road in Parana township; plans for paving three miles of Fischer road have been agreed on and for the rest the county has \$275,000 of its own money available for the improvement. This will permit 13 miles of pavement, 14 feet wide; petitions from property owners are on file for a dozen other roads.—R. J. Mackenzie, Chairman of the Board.

Columbus, O.—The City Solicitor is preparing an ordinance for issue of \$1,000,000 grade crossing bonds.

Conneaut, O.—Bids will be received, December 14, for the purchase of \$20,000 street improvement bonds.—H. T. Culp, City Auditor.

Delaware, O.—Council has passed the preliminary legislation to pave Lincoln avenue with vitrified brick. Several other streets are to be paved early in the spring.—Address John G. Williams for particulars.

East Liverpool, O.—The City Engineer is preparing an estimate of the cost of paving Pennsylvania avenue; legislation will be introduced as soon as the estimate is ready.

Fremont, O.—Bids will be received, December 16, for \$7,500 4½ per cent. semi-annual West Depot street paving bonds.

Hamilton, O.—Bids will be received, December 11, for \$40,000 4 per cent. street bonds.—John A. Keller, City Clerk.

Lacarne, O.—Bids will be received, December 23, for \$4,000 5 per cent. semi-annual road bonds.—Address Chas. Fritsche.

Lima, O.—Council has passed an ordinance to provide for issue of \$10,000 paving bonds.—Address City Clerk.

Youngstown, O.—The Directors of Public Service have decided to reject all bids for the paving of Summit and Wick avenues, Sherman De Groot was low bidder for both jobs. Council has decided to have the paving of both streets held up until next spring. Early in the spring the Board will re-advertise for bids on the two contracts and the Wick avenue paving legislation will be so changed as to have the pavement extended from Madison avenue to Broadway instead of to Woodbine avenue.

Beaver, Pa.—The Pennsylvania Railroad Company is preparing to expend \$75,000 on paving and putting cement curb on New Brighton street in return for certain concessions which they will receive from the city.

Boyetown, Pa.—Council has authorized an issue of \$28,000 bonds for paving purposes.—Address City Clerk.

Hazleton, Pa.—An ordinance for paving Church street from Broad to Diamond avenue has been passed.

Houston, Tex.—The Attorney General has approved issue of \$500,000 Harris County road and bridge bonds.—Address County Auditor.

Spokane, Wash.—Bids will be received, December 15, for the purchase of \$400,000 street bonds; interest, 4½ per cent. The bonds will be payable in twenty years after date.—Robert Fairley, City Comptroller.

Aubrey L. White, President of the City Park Commission, is at work upon a plan to provide for streets and avenues of uniform width and parked; also to create a Forestry Department which shall have charge of the parking and thoroughfares.

Milwaukee, Wis.—The Council Finance Committee recommends the advertising at a private sale of \$205,000 street bonds.—Address City Comptroller.

SEWERAGE

Galesburg, Ill.—Council Committee has been appointed to consider establishment of septic tank sewage disposal system for purification of matter emptying into Cedar Fork.

Harvard, Ill.—The Board of Public Improvements has directed plans and specifications to be prepared for sewer system.

La Harpe, Ill.—Although the plan to establish a sewer system has to be given up, a plan is now on foot to put in a good drainage system that will carry off the surface water from the south side of town, which is quite low.

Rockland, Ill.—The Ways and Means Committee is discussing the matter of securing \$106,000 for sewer purposes.

Angola, Ind.—Construction of a 20-inch pipe sewer on South Wayne street is under consideration.—L. E. Smith, City Engineer.

Aurora, Ind.—All bids received on November 11 for constructing sewers were rejected; bids will not be called for until February or March.—Frank D. Johnston, City Clerk.

Churubusco, Ind.—Town Board plans to make a 2,500-ft. extension to sewer now under construction here.—E. K. Strong, Columbia City, Engineer.

Indianapolis, Ind.—Plans and specifications have been adopted by the Board of Public Works for the new 26th street sewer; estimated cost, \$25,000. Bids will soon be asked for the construction of four sewers, one in Onasso avenue, one in the first alley north of 29th street, one in 31st street, and one in 26th street; plans for these improvements have been ordered by the Board of Public Works.—Blaine H. Miller, City Engineer.

Logansport, Ind.—The City Engineer, John Schmidt, has been directed to prepare estimates for extending sewer system.

Wellington, Kan.—Plans for sewer system are practically completed and bids for construction will be asked soon.

Lexington, Ky.—Mayor Waddy has signed ordinances providing for the construction of sanitary sewers in Clay avenue and in West Sixth street from Broadway to Jefferson.

Grand Rapids, Mich.—The Sewer Committee has recommended that Council purchase site for new pumping station for Front street sewers. Plans are being prepared for the construction of the 8-foot trunk sewer to form a continuation of the Broadway sewer; estimated cost, \$90,000.—L. W. Anderson, City Engineer.

St. Clair Heights, Mich.—Council proposes to issue bonds for sewer construction.—Address City Clerk.

Meriden, Miss.—Council Sewer Committee has been instructed to get estimates on cost of establishing sewer system in the cotton mill district; system would cost about \$7,000.

Kansas City, Mo.—The Board of Public Works has directed plans and estimates to be made for improved sewer systems.

Richmond, Mo.—This place has voted against establishing sewer system; vote was about 4 to 1 against proposition.

St. Joseph, Mo.—Ordinance will come before Council calling for a bond issue of about \$325,000 for extending sewers.—David Lawlor, City Engineer.

Forsyth, Mont.—The citizens have voted \$10,000 bonds for sewer purposes.—Address City Clerk.

Elko, Nev.—Plans for the construction of a sewer system have been drawn up; estimated cost, \$60,000.

Eaton, O.—Bids will be opened, December 16, for \$10,000 4½ per cent. semi-annual sewer bonds of village.—R. F. Craig, Mayor.

Grand View, O.—The Ohio Realty and Construction Company contemplates erecting a

private sewage disposal plant; estimated cost, \$60,000.

Marion, O.—Residents of West Marion have asked for the construction of a large sewer drain along the line of Old Goose creek, the cost of which will be about \$5,000. W. B. Denman is Chairman of the Business Men's Committee having in charge the construction of this improvement; City Engineer Dwyer will make the preliminary estimates.

Mingo, O.—Council has adopted concrete sewers instead of brick; bids have recently been opened for a number of sewers, but they were unsatisfactory, and new bids will probably be invited; an ordinance providing for an issue of \$50,000 bonds for sewer purposes has passed.

Toledo, O.—An ordinance is before Council authorizing issue of bonds for sewer purposes.—John M. Babcock, Clerk of Council.

Youngstown, O.—Bids will be received, December 16, for \$7,385 bonds for Walnut and Bane street sewer; \$7,100 for Elm street district sewer, and \$10,285 for sidewalks in various streets.—William I. Davis, City Auditor.

Chester, Pa.—New sewers are contemplated in Upland Borough.

Hoboken, Pa.—Plans for the erection of a sewage disposal plant at the Allegheny City home at Claremont have been approved by Dr. Samuel G. Dixon, State Health Commissioner; estimated cost, \$10,000.

Racine, Wis.—The Board of Public Works has prepared plans, specifications and estimate of cost for the construction of several public sewers as follows: 896 lineal feet of 18-inch pipe at \$2.25, \$2,016; 300 lineal feet 15-inch pipe at \$2, \$600; 4 manholes deepened, at \$25, \$100; 2 new manholes, at \$40, \$80; 4 catch basins reconnected, at \$25, \$100; 1 flush tank removed, \$10; total, \$2,906.

WATER SUPPLY

Eldorado, Ark.—The Eldorado Waterworks Committee contemplates installing water works and will engage M. P. Jackson to make surveys; estimated cost, \$35,000.

Pasadena, Cal.—The stockholders of the Water Company will ask payment for improvements in addition to the purchase price agreed on, the amount being fixed at not more than \$180,000. This proposition is to be submitted to the voters. In addition an issue of at least \$200,000 is needed for the light plant under the plans, while the school department demands \$200,000.

Sparks, Ga.—The citizens have decided to issue \$20,000 bonds for putting in a system of water works and electric lights.

Galesburg, Ill.—Measures will probably soon be taken by the Water Committee which will result in the increase of the city's available water supply from 20 to 25 per cent.

Rockton, Ill.—The matter of issuing bonds for constructing water system is being considered.

Versailles, Ky.—The city has voted \$60,000 water works bonds.—H. C. Taylor, Mayor.

Baltimore, Md.—Specifications are being prepared for the new high-service reservoir; contracts will probably be let before January 1, 1908.—A. M. Quick, Water Engineer.

Berren Springs, Mich.—Bids will be received, December 2, for the purchase of \$19,500 4½ per cent. thirty-year water and light bonds.—Loren B. Marquissee, Village Clerk.

Hibbings, Minn.—Council has decided to establish a meter system.

Sauk Rapids, Minn.—The city is having plans and specifications made for a new water works system; estimated cost, \$25,000.

Harrisonville, Mo.—Bonds, \$30,000, have been voted for the construction of a municipal water works system.

Benson, Neb.—The citizens have voted \$9,000 in bonds for improving water system.

Dilworth, N. D.—Engineer Rollette is seeking bids upon the connecting of the two reservoirs at Gantz by pipes to be run under the bed of the Buffalo river; when the connection is made water can be pumped from the Buffalo into both reservoirs at the same time.

Lenoir, N. C.—Bids will be received, December 15, for the purchase of \$80,000 water and street improvement bonds; interest, 6 per cent.; time, twenty years.—J. C. Seagle, Secretary and Treasurer.

Alliance, O.—Quite an expenditure is proposed for the extension of water and fire protection early in the spring.

Sandusky, O.—Following the recent visit here of Dr. Frank Warner and Chief Engineer R. W. Pratt of the State Board of Health, the plans for the Sandusky filtration plant have been approved by the Board.

Toledo, O.—The citizens of southeast Toledo have petitioned for the extension of water mains.

Worthington, O.—Bond S. Neff has been granted a franchise to establish water plant.

Claremore, Okla.—The city has voted to expend \$40,000 in extending water works.—W. P. Johnson, Clerk.

Hermiston, Ore.—The city may install a

water works system; estimated cost, \$25,000.

Fairchance, Pa.—Bonds, \$20,000, for a water works system, have been voted by the city.

Columbia, S. C.—According to an estimate submitted by the City Engineer to Council at a former meeting, the cost of providing water works for the proposed territorial annexation of the Elmwood suburb would be about \$14,000; the cost of lights would be according to the number necessary at the regular price charged the city for them; the cost of the sewerage for the new territory would be about \$4,500. The ordinance providing for an election to be held to ascertain whether this suburb should be annexed to the city of Columbia has been passed to the second reading.

Esteline, S. D.—The city may have a water works system constructed, the Mayor, City Clerk, and members of the Council having been appointed a committee to inspect the water works systems of adjacent towns.

Port Pierre, S. D.—Bids will be received, January 21, for the purchase of \$9,000 5 per cent. twenty-year water works bonds.—M. A. MacMillen, City Auditor.

Temple, Tex.—The city has decided to purchase the plant of the Temple Water Works Company for \$120,000 and \$50,000 will be expended in improvements.

Roanoke, Va.—The Roanoke Gas and Water Company is preparing to lay four miles of 10-inch to 4-inch water mains; a new pumping station will be built in the spring.—H. H. Baughman, Superintendent of Works.

Chehalls, Wash.—Council has passed an ordinance in favor of the gravity water system.

Sheboygan, Wis.—The city has received but one bid for the purchase of \$360,000 water works bonds.

LIGHTING AND ELECTRICITY

Birmingham, Ala.—The Greater Birmingham Electric Light and Power Company has been organized with a capital of \$196,000 to furnish electric light and power; all wiring will be under ground; franchises will be asked of various municipalities in the Birmingham district.—J. M. Bradley, President of the Company.

Colusa, Cal.—The Snow Mountain Electric Power Company will receive bids about January 1 for constructing a water-power electric plant to cost \$250,000 at Colusa; the Sierra Construction Company planned the work.

Albany, Ga.—J. B. Sirrine, of Greenville, will prepare plans for the Albany Power and Manufacturing Company, for the development of about 10,000 horsepower at Porter Shoals, on Flint river, where it is planned to build a dam and power house to be equipped with electrical machinery for generating and transmitting electricity.

Lagrange, Ga.—The city probably will increase the capacity of electric light and power plant by installation of additional boiler and engines, expending about \$20,000.—J. R. Black, Manager.

Sparks, Ga.—The citizens have voted \$20,000 6 per cent. thirty-year electric light bonds.—Address City Clerk.

Moscow, Idaho.—Council is considering the question of constructing a municipal electric light plant.

Harvard, Ill.—Council has passed a resolution granting Paul F. Seguster and Warren S. Stearns, of Rockford, the right to install a gas plant in Harvard for lighting, heating, cooking, etc.; they will commence work at once, securing the necessary frontage consents from citizens, and, if successful, will install a \$30,000 plant.

Lockport, Ill.—The Economy Company has made a proposal based on a fifty-year franchise service during the first four years to be free of charge and after that the city to pay \$5,000 per year for the current used for the city lamps and for pumping.

Knightstown, Ind.—Bids will be received, December 22, for \$12,000 6 per cent. electric light bonds.—Charles E. Baxter, Town Clerk.

Washington, Ind.—Bids will be received, December 16, for the city's stock in the Washington Light and Water Company, consisting of 207 shares out of a total of 210. The plant will be sold to the highest bidder, the buyer to operate the plant under the present franchise.

Covington, Ky.—The Board of Public Works has directed bids to be asked for the purchase of \$75,000 worth of bonds issued for the construction of electric light plant.

Lecompte, La.—The city is advertising for plans and specifications and for bids for installing electric light plant, to cost about \$10,000.

Baltimore, Md.—The leasing of the Baltimore Electric Company by the Consolidated Gas, Electric Light and Power Company is under consideration.

Superintendent of Lamps and Lighting McCuen plans to more than double the number of lights along a part of Baltimore street, and contemplates using cluster lights on ornamental posts.

Garden, Mich.—The erection of municipal light plant proposed.

Belair, Mo.—The Belair Electric Company will make improvements to plant and expects to furnish current both during day and night, for which purpose plant of Hollingsworth Wheel Company on Winters run, as well as plant now in operation will be utilized.

Maysville, Mo.—The citizens will vote on the question of issuing \$10,000 electric light bonds.

Natchez, Miss.—Council proposes to employ an expert to figure on the cost of adding an electric light plant to the water works for the purpose of generating current for the public streets; the street lighting contract expires next March; the city is paying \$15,000 a year for public lighting.

Stella, Neb.—Stella Electric Light Company, recently awarded contract for city lighting, will at once erect a plant.

Atlantic City, N. J.—A special bond ordinance has been passed authorizing the issue of \$35,000 worth of bonds with which to provide money for brilliant illumination of Atlantic avenue the coming year.

Lockport, N. Y.—The International Power and Transmission Company, a subsidiary of the Niagara, Lockport and Ontario Power Company, has applied to the city for a franchise; its power lines are constructed to the city and it has purchased a right-of-way into the business district.—E. M. Ashley, P. F. King, and others, are at the head of it.

Sulphur Springs, N. C.—Smith & Powers are preparing plans for the combined electric plant and water works, to cost about \$25,000.

Coshocton, O.—The power plant which is to be installed by the Coshocton Light, Heat and Power Company for the canal and six-mile dam will be commenced in the spring; the work on the dredge is now in progress.

Minerva, O.—The Board of Public Affairs has decided to buy 150-h.p. boiler for the power plant, to cost \$1,500.

New Bremen, O.—The question of issuing \$20,000 municipal lighting bonds will be submitted to a vote of the people.—Address City Clerk.

Rawson, O.—The Village Council has taken steps to light the streets of the town with electricity.

Sayre, Pa.—A five-year contract has been made between the city and the Sayre Electric Company for lighting the streets of the Borough of Sayre. The lamps are to be of the incandescent type and are guaranteed to furnish 105 watts, with a deduction to be made for each night out. The borough is to pay \$20 per light on the basis of the five-year contract. The Sayre Electric Company has recently purchased the plant of the Waverly Electric Light and Power Company, and it is making such improvements as will double its capacity.

Westerville, O.—An ordinance is before Council authorizing issue of \$1,500 in bonds for improving electric plant.—R. H. Wagoner, Clerk.

Wrightsville, Pa.—The Wrightsville Light and Power Company, which recently issued \$20,000 of additional bonds, will make extensive improvements in its plant, and if arrangements can be made will furnish day current; if this is done all patrons will be required to use a meter and pay the light used; heretofore rates were issued at the rate of 50 cents per 16-candle-power light a month.

Milton, Ore.—The city officials are considering the question of increasing the capacity of the municipal electric light plant; the City Recorder has filed on 3,600 miner's inches as instructed by the City Council; it is proposed to extend the barrel flume up the Walla Walla river a distance of 5,000 feet; by this extension it is estimated that 500 additional horsepower can be secured at a cost of \$15,000; this would not include the cost of enlarging the power-house and purchasing the necessary additional machinery, which is estimated would cost from \$10,000 to \$15,000 more.

Charleston, S. C.—Bids for lighting the streets have been rejected, it being decided in Committee to place this matter in the hands of the new Council.

Mitchell, S. D.—The Mitchell Illuminating and Power Company has been organized and will improve the electric light plant.

Chattanooga, Tenn.—The Chattanooga Electric Company will increase capacity of plant and is having estimates prepared for 1,500 kilowatt turbine generator; the power plant will then have capacity of 5,500 kilowatts, represented by one 1,500, two 1,000 and four 500-kilowatt machines.

Salt Lake City, Utah.—With a capital of \$500,000 the Beaver River Power Company of Colorado was incorporated, to engage in the building of power plants and the sale of electric light.—L. L. Nunn, President; Elden P. Bacon, Secretary.

FIRE EQUIPMENT

Council Bluffs, Ia.—The City Solicitor has been instructed to investigate possibility of issuing bonds for erection of new No. 3 hose house.

Grand Rapids, Mich.—The Building Inspector recommends the erection of an additional fire station.

Lansing, Mich.—Because of the low water pressure at various times, the members of the Police and Fire Commission are of the opinion that the city should buy two fire steamers, and so recommended to Council.

Springfield, Mo.—Council has appropriated \$5,000 for improving fire station.

Jersey City, N. J.—Bids for a chemical engine will be re-advertised.

Jamestown, N. Y.—A new fire company is to be located at Allen street and Tiffany avenue.

Springfield, O.—Bids are to be invited for installing the fire alarm storage battery system and increasing the current from five to ten, data having been furnished by Fire Chief Hunter to City Solicitor Stewart L. Tatum to prepare the advertisement; specifications will be asked from each bidder.—Frank Crothers, City Clerk.

Warren, O.—A bond issue ordinance for \$10,000 has passed first reading to provide funds for the proposed new fire building in the North End, for which Architect H. Harwood has prepared plans; the building will be of brick, 26 by 56 feet in dimensions, and will be two stories high, heated with steam and illuminated with gas and electric light.

Dunmore, Pa.—The Fire Committee and Chief of the Fire Department have been instructed to purchase a new wagon for the use of the Independent company.

Clinton, S. C.—A Volunteer Fire Department has been organized, consisting of two hose companies of white men and a hook and ladder company of negroes.

Salt Lake City, Utah.—The residents of the Poplar Grove Suburbs have petitioned for fire station to be established at South and West streets.

Ashland, Va.—The Ashland Fire Company has been organized with G. F. Delarue as Chief; a committee has been appointed to solicit funds for purchasing a new engine.

Seattle, Wash.—An auxiliary system of salt water mains, covering the district bounded by Pike street on the north and Jackson street on the south, and extending from the waterfront to Third avenue, with a line on Pike street as far east as Fifth avenue, including a pumping station with a capacity of 10,000 gallons of water a minute, has been ordered by the Council. The Engineering Department estimates the cost of the system at \$340,000. In case of necessity the fireboats may be used in connection with the pumping station in supplying salt water to the system.

Spokane, Wash.—Council is arranging to establish a Gamewell fire alarm system.

PUBLIC BUILDINGS

Pasadena, Cal.—An election will be held to vote on the question of issuing \$50,000 school house bonds.

Anderson, Ind.—Dunlap & Glossup and R. P. Daggett & Co., 28 Marion Block, Indianapolis, will prepare plans for a three-story high school building for the School Board, to cost \$125,000.

Greensburg, Ind.—The County Board will receive bids for the purchase of \$30,000 county infirmary bonds.—Address County Auditor.

Michigan City, Ind.—The County Commissioners have decided to erect a Court House to cost \$125,000; the contract will be let this year.

Cambridge, Mass.—Mayor Walter C. Wardwell advocates the erection of a tuberculosis hospital.

Hart, Mich.—The Oceana County will vote on the question of issuing Bonds for the construction of Court House.—Address County Auditor.

St. Louis, Mo.—The Building Committee of Board of Education, composed of George R. Lockwood, C. M. Woodward and others, has adopted revised plans by William B. Ittner, Commissioner of School Buildings, for erection of proposed school building to cost about \$700,000, original plans for which were prepared by Mr. Ittner about a year ago; the building will be 289 by 250 feet.

Omaha, Neb.—The School District of Omaha has voted \$500,000 bonds, to be used in construction of three new grade school buildings; a new North Side High School building, a wing to the Central High School building, and other buildings to be decided upon later.—J. F. Burgess, Secretary School Board.

Porter, Okla.—An election will be held to vote on the question of issuing bonds for the erection of Court House.—Address Clerk of the Board.

Portland, Ore.—One new high school and approximately 40 rooms for the extension of

the grammar schools will be recommended by the Board of Education for erection during next year, the total cost to be between \$250,000 and \$300,000; it will probably require two years to erect the new high school building and bonds may be voted for that purpose, but it is intended to have the new rooms for grammar grade pupils in readiness by the opening of the next school year and the taxpayers will be called on at the December election to authorize a levy high enough to provide \$150,000 for this work.

Philadelphia, Pa.—The erection of nine new school buildings practically has been decided upon by the Board of Education, to be located in the sections most urgently requiring relief from overcrowding; it is expected that the program of construction will include the following new schools: 42d Ward, twelve division building to replace Feltonville school; 26th Ward, 30 division building to replace Jackson school; Fifth Ward, 40 division building; Second Ward, 20 division building; Twelfth Ward, 15 division building; 34th Ward, 24 division building; 23d Ward, 18 division building; Eleventh Ward, 24 division building; and 37th Ward, 15 division building; in addition a new structure will be built to replace the Chandler school in the 18th Ward, and it is hoped to erect a new building at 15th and Mt. Vernon streets for the Girls' Commercial High School.

Arp, Tex.—The Attorney General has approved issue of \$15,000 school bonds.—Address City Clerk.

Livingston, Tex.—The citizens have voted \$23,000 school bonds.—Address Clerk of the Board.

Rose Bush, Tex.—The citizens have voted \$20,000 bonds for school purposes.—Address Clerk of the Board.

Myra, Tex.—The citizens have voted \$7,000 bonds for school purposes.—Address Clerk of the Board.

Teague, Tex.—The Attorney General has approved issue of \$15,000 school bonds.

Chester, W. Va.—The question of issuing \$10,000 bonds for City Hall and Fire Department building is under consideration.

Galesville, Wis.—Bonds, \$27,000, have been voted for building high school.—Address Clerk of the Board.

STREET RAILWAYS

Paris, Ill.—A franchise has been granted to the Terre Haute & Western Traction Company, permitting the extension of its line to the west limits of the city, on Washington street; this line is owned by the McGowan interests, of Indianapolis, and the new franchise is believed to be preliminary to an extension to Charleston and other points west, with St. Louis as the ultimate objective point; as a consideration for the franchise, the company assumes half of the expense of paving the street.

Bozeman, Mont.—Citizens have subscribed \$20,000 for an electric interurban railroad.

West Carrollton, O.—The County Commissioners have directed the Cincinnati Northern Traction Company to at once build bridge to connect West Carrollton and Alexandria.

Durant, Okla.—The Red River Railway Company has been incorporated with a capital of \$5,000,000, with headquarters at Durant and Oklahoma City, to build 200 miles from the Texas State line north of Benham to Oklahoma City, with numerous branches provided; the intention is ultimately to make of it an electric trolley system.

Guthrie, Okla.—The Gulf Short Line has been chartered at Guthrie, Okla., to build a road from Kansas City, Kan., to Port Lavaca, Tex., about 1,500 miles; it was incorporated by J. P. Byrne, Louis E. Potts, of Oklahoma City, Fred A. Jeran, La Junta, Colo., and others; offices of the company will be at Kansas City, Kan., and Oklahoma City.

Lawton, Okla.—The Kansas Lawton & Gulf Railroad has been incorporated with a capital of \$5,000,000, to build southeast from the Kansas State line, through the Oklahoma counties of Woodward, Woods, Dewey, Dav, Roger Miles, Custer, Washita, Caddo, Kiowa, and Colancho, to a point on the Red river near Waurika, and passing via Taloga and Lawton; the incorporators are: J. M. Bellamy, S. P. Thornhill, Charles G. Shane, and others.

Tecumseh, Okla.—The Rapid Transit Interurban Company, with headquarters at this place, has been incorporated with a capital of \$2,500,000, to build a line from Muskogee, via Tecumseh to Guthrie; the incorporators are: John A. Clark, L. B. Mitchell, J. W. Saxton, and others.

Fort Worth, Tex.—An ordinance granting the Fort Worth Belt Railway Company a franchise on Twenty-first street to Rusk and from Grove to Twentieth street has been adopted.

Seattle, Wash.—The Seattle Electric Company has been granted a street car franchise on Twenty-third avenue and Twenty-third avenue North, for an additional line to the University and Exposition grounds. This

company submitted the only bid for the franchise.

Oshkosh, Wis.—The Northwestern Railway will be required to plan safety gate at Werritt avenue.

St. Vital, Man., Can.—The municipality has decided to build its own electric car lines into Winnipeg, a distance of about twelve miles.

BRIDGES

Gadsden, Ala.—The Louisville & Nashville Railroad proposes to build a bridge across the Coosa river at this place.

Prescott, Ark.—The joint meeting of the Bridge Commissioners of Clark and Nevada counties was held and McIntosh's Bluff, on old Rome road, was selected as the site for the new bridge across the Little Missouri river, to be built by two counties; the bridge will cost about \$8,000.

Tampa, Fla.—An election will be held, January 7, to vote on the question of issuing \$600,000 bonds for improvements; it is proposed to build a bridge over the Hillsborough river at Lafayette street.

Atlanta, Ga.—The City Council and the County Commissioners propose to build a viaduct at Bellwood avenue across the railroad tracks.

Mankato, Minn.—The city and county and North Mankato are working together with a view to building a second steel bridge across the Minnesota river, to cost about \$20,000, for which the State has appropriated \$6,000; the Nicollet County Board is to be asked to assist, in which event the bridge is considered assured.

Sunrise, Minn.—Bids will be received, December 15, for the purchase of \$4,000 bridge bonds.—G. E. Deming, Town Clerk.

Vicksburg, Miss.—The Board of Supervisors of Warren County has rejected all bids for erection of Ivanhow bridge, and will advertise for new bids in April.

Oswego, N. Y.—Plans for the new street wide bridge in place of the present lower crossing are to be made by C. E. Stowell, of Albany, former Bridge Engineer of the State Railway Commission.

Bethlehem, Pa.—The Commissioner of Northampton and Lehigh counties have decided to build a concrete bridge at Bethlehem.

Hampton, Va.—Elizabeth City county has voted \$20,000 bonds for repairing Hampton bridge.—David Johnson, County Treasurer.

Wheeling, W. Va.—The Fire Chief recommends the immediate necessity of building a new Market street bridge.

MISCELLANEOUS

Oakland, Cal.—Resolutions are being considered that declare it to be the unanimous sentiment of Council that the water front should be improved, and also that bonds should be voted, \$1,450,000 for a new City Hall, and \$100,000 for a garbage cremator.

Palo Alto, Cal.—The purchase of a street sweeper for the use of the Street Department has been authorized, at a cost of \$350.

Colorado Springs, Col.—Plans and specifications prepared by E. R. Ashworth, City Engineer, for the improvement of parking district No. 3, lying on Cascade avenue, between Platte avenue and Cache La Poudre street, have been accepted by a special committee of the Board of Aldermen; estimated cost, \$27,000; bids will soon be asked.

Tampa, Fla.—An election will be held, January 7, to vote on the question of issuing \$600,000 bonds for improvement purposes.—Address City Clerk.

Aurora, Ill.—The Board of Public Works has decided to advertise for bids for a new air compressor.

Joliet, Ill.—City Clerk Berscheid has been instructed to advertise for bids for the improvement of Hickory creek in the following manner and between the points named: By deepening and widening from a point 100 feet south of the Second avenue to the Fourth avenue, making the channel 100 feet wide and removing all trees, shrubs and gravel deposits, and doing all other work necessary to provide a free outlet for the increased flow of water. By deepening and removing all obstructions between the mouth of Spring creek and Akin avenue. This work comes as a part of that which is being done by the Spring Creek Drainage Commission and is intended to make the undertaking as near a success as is possible and to protect the property adjoining Hickory creek. From Second to Fourth avenue Engineer Stevens has estimated that 3,045 cubic yards of excavation will be necessary. The cost of the improvement will be paid from the money paid the city by the Chicago & Rock Island Railroad Company for certain concessions connected with the Spring creek improvement.

Crawfordsville, Ind.—Bids will soon be asked for the construction of a vitrified roadway in Walnut street from Market to College streets, and for the construction of a

vitrified roadway and cement curb and gutters in College street, from Grant to East street, and in Water street, from Market to College street.—H. B. Hulett, City Clerk.

Louisville, Ky.—The report of the Board of Public Works recommends the purchase of twenty flushers for the Street Department.

New Orleans, La.—Bids will be again advertised for lease of the Third District Ferry. The \$25,000 upset price will be eliminated.—Address Clerk of Streets and Landing Committee.

Hibbings, Minn.—Council has decided to establish a meter system.

Newark, N. J.—The Board of Works has directed Chief Engineer Sherrerd to prepare a plan and maps showing the riparian lands and other tracts needed to carry out the project, based on the Lane dock law, to construct and maintain a ship canal and dock system. On suggestion of James Owen, who is the city's Consulting Engineer on matters pertaining to docks, copies of the maps prepared by the Engineering Department, showing what riparian lands are needed, will be filed with the State Riparian Commission, with a view of preventing other parties from pre-empting the land.

Scotia, N. Y.—Sealed proposals will be received, December 3, for \$24,000 Village Hall, water, and sewer bonds.

Smithfield, N. C.—The Committee on Electric Plant, Sewers and Water Works Construction has selected Holmboe Company, Lincoln Savings Bank Building, Louisville, Ky., to prepare plans and specifications for plant.

Bellevue, O.—Bids will be received, December 20, for \$5,088.20 improvement bonds.—Geo. Lieber, Village Clerk.

Dayton, O.—The proposition to issue bonds for railway track elevation, police station and river bridge was defeated at the last election.

Elmwood, O.—The proposition to issue Town Hall and sewer bonds has been defeated.

Rockport, O.—Bids will be received, December 2, for the purchase of \$13,000 thirty-year 4½ per cent. village bonds.—W. L. Nichols, Clerk.

Memphis, Tenn.—The Memphis Terminal Company, which is to build the union passenger station, has decided upon the location of the terminal, which will face south on Iowa avenue, between Driver and Fourth streets, and will cost about \$3,000,000; it is estimated that it will take about three years to complete the new station; about 45 acres of land have been purchased and 15 more are needed.

Fort Worth, Tex.—An election will be held to decide the question of issuing \$150,000 improvement bonds.

Spokane, Wash.—The contract for erecting an 80-ton cremator to increase the capacity of the present plant has been awarded by the Board of Public Works to the Decarie Mfg. Co., 23 South Second street, Minneapolis, Minn., for \$60,000.

Madison, Wis.—The Wisconsin Capital Commission invites separate proposals for furnishing each of the following kinds of equipment for heating and power plant for the Capitol building: boilers, engines, electrical generators, and motors, mechanical stokers, feed and supply pumps, storage tanks, conveying machinery, hoisting crane, open heaters; all to be according to plans and specifications of Storm Bull, Consulting Engineer.—Lew. F. Porter, Secretary of Capitol Commission.

BIDS RECEIVED

Oceanside, Cal.—The Pacific Coast Manufacturing Company, of Los Angeles, has been awarded contract for 1,500,000-gallon cross-compound, horizontal, tubular boiler, guaranteed duty 90,000,000 foot pounds per 1,000,000 B.T.U., head pressure pumped against 90 pounds, for \$16,862.—H. D. Brodie, City Clerk.

San Francisco, Cal.—The contract for repairing East street, from Market to Folsom streets, with asphalt blocks, was let to C. L. Harney, for \$12,625; the Eureka Construction Company was given the contract for the repair of the roadway on Center street for \$7,303.

Washington, D. C.—The District Commissioners have opened bids, November 16, for the construction of an eight-room school building in square bounded by L and M and Third and Fourth streets, Southeast; seven contractors bid for the work, and the bids were divided into two classes; class A in the specifications called for woodwork on the trimmings and class B called for stone. The lowest bid received was that offered by Robert T. Humphrey, who bid \$45,650 for class A and \$48,825 for class B. The other bidders and their prices were: Burgess & Parsons, \$49,429 for class A and \$50,254 for class B; Pavarini & Wyne, \$49,900 for class A and \$51,100 for class B; Thomas H. Melton, \$50,900 for class A and \$51,945 for class B; Milton C. Davis, \$51,626 for class A and

\$53,301 for class B; J. M. Dunn, \$47,220 for class A and \$48,195 for class B; S. H. Brinkley, \$49,000 for class A and \$49,300 for class B.

The Commissioners have also opened bids for the construction of a chemical fire engine house in Langdon and a fire truck house in Lanier Heights, on Lanier place between Ontario street and Adams Mill road. The lowest bid received for the construction of the chemical house in Langdon was that of Burgess & Parsons, whose estimate was \$16,400. The other contractors and the amounts of their bids were: James M. Dunn, \$16,400 and Robert T. Humphrey, \$16,900. The lowest bid for the Lanier Heights truck house was that of Thomas H. Melton, whose estimate was \$23,547. The other bidders were James M. Dunn, \$25,400, and Burgess & Parsons, \$28,700.

The contract for laying cement sidewalks on both sides of Rhode Island avenue northeast, under the Baltimore and Ohio Railroad viaduct crossing, has been let by the Commissioners to the R. J. Beall Construction Company, 1217 F street, Northwest, at \$1.27½ per square yard; other bidders were: Fred Drew, Colorado Building, \$1.30 per square yard; R. E. Boisseau, 3247 Prospect avenue, Northwest, \$1.56 per square yard.

Lawrenceberg, Ind.—Thomas J. McKim, of Lawrenceberg, is low bidder, at \$15,576, for protecting and improving the river embankments at this point.—Col. W. T. Russell, U. S. Engineers.

Seymour, Ind.—Spencer & Shields were low bidders for constructing 583 feet 10-inch vitrified sanitary sewer, gravel paving to be excavated and relaid, sand excavation, at 49 cents per foot, total \$356.67; De Goyler & Welch were low on 1,520 feet 15-inch sewer, for \$1,790; manholes, 10 feet deep, \$30; wages of common labor, \$1.75 per day; Harry Marberry bid \$466.84 for the 10-inch and \$2,000 for the 15-inch sewer.—J. F. McCarthy, City Engineer.

Cedar Rapids, Ia.—M. Ford has been awarded contract for 5,080 square yards brick block, 6-inch macadam and 2-inch sand foundation, at \$1.48; 1,700 cubic yards sand and clay excavation, at 28 cents, and setting 2,390 feet new cement curb, 48 cents, curb and paving all in one contract; total, \$9,144.60.—T. R. Warriner, City Engineer.

Topeka, Kan.—J. W. Prince, of Parsons, has been awarded contract for erecting an administration building and auditorium at the Parsons State Hospital, for \$56,308.—F. W. Knapp, Secretary, Board of Control.

Baltimore, Md.—The contract for the disposal of the city's garbage for a period of 10 years, beginning on January 1 next, has been awarded to the Baltimore Products Company, of which Michael T. Homer is president, and in which David Peoples, one of the sewerage contractors, and a group of Philadelphians are reported to be interested. The contract price for the first year will be \$45,000. The new contractor will use the disposal plant in South Baltimore, which is to be taken over by the city on January 1, and will re-erect it at least 10 miles outside the city limits. For the disposal plant the Baltimore Products Company will pay the city \$100,000. There were only two bidders, the Baltimore Products Company and the Southern Products Company. The Southern Products Company also offered to purchase the plant for \$100,000, but its bid for disposing of the garbage for the first year was \$52,000, which was \$7,000 more than the Baltimore Company's bid. The discrepancy between the two bids decreased with each succeeding year of the 10-year contract. The Baltimore Company's contract price will increase \$1,800 a year until the maximum figure in the tenth year is \$61,200. The Southern Company's price would have increased but \$1,500 a year until the tenth year, when the contract figure would have been \$65,500.

Boston, Mass.—Bids were received at Massachusetts Metropolitan Water & Sewerage Board, Boston, November 15, for constructing in rock and earth trench and tunnel Sections 81 and parts of Sections 83 and 85 High Level Sewer, in Brookline and Brighton, Mass., as follows: Contract No. 60, Section 81.—Falvey & Kelley, \$88,400; Geo. J. Reagan, \$80,431; Jas. Driscoll & Son, \$64,510; Geo. M. Byrne Co., \$63,120; T. J. O'Connell, \$61,400; Donovan & Phillips, \$59,515; Donovan & Doyle, \$59,423; Hugh Nawn Contr. Co., \$57,450; Bruno & Pettitt, Boston, \$56,980.

Contract No. 61, Section 81.—Jas. Driscoll & Son, \$74,045; T. J. O'Connell, \$59,285; Patrick McGovern, \$58,455; Bruno & Pettitt, \$56,690; Hugh Nawn Contr. Co., Somerville, \$53,100.

Contract No. 62, Section 83.—Patrick McGovern, \$71,486; Jas. Driscoll & Son, \$69,540; Hugh Nawn Contr. Co., \$68,728; John E. Palmer, \$63,166; Chas. G. Craib & Co., \$59,980; T. J. O'Connell, \$54,672.

Contract No. 63, Section 85.—Jas. Driscoll & Son, \$67,580; Falvey & Kelley, \$56,064;

Coughlan & Shields Co., \$54,056; Bruno & Pettitt, \$53,100; Patrick McGovern, \$52,530; Hugh Nawn Contr. Co., \$51,910; D. T. O'Connell Co., \$51,056; Geo. M. Byrne Co., \$50,856.

Contract No. 64, Section 85.—Falvey & Kelley, \$143,800; Bruno & Pettitt, \$107,600; Coughlan & Shields Co., \$97,800; Patrick McGovern, \$95,150; Hugh Nawn Contr. Co., \$94,150; D. F. O'Connell Co., Boston, \$92,400.

Contract No. 65, Section 85.—Patrick McGovern, \$72,200; D. F. O'Connell Co., \$71,400; Hugh Nawn Contr. Co., \$51,910; D. T. O'Connell, \$67,450.

The details of the low bids were as follows: Contract No. 60, Bruno & Pettitt, 23 Court street, 2,140 feet 6 ft. 6 in. by 7 ft. earth excavation and refilling in trench, \$9.50 per foot; the highest bid was \$20; 50 cu. yds. brick masonry, Portland in manholes, \$15; high bid, \$20; concrete masonry, Portland, in trench, \$8.50; high bid, \$9; rock excavation in trench, \$3.50; high bid, \$7.

Contract No. 61.—Hugh Nawn Contracting Co., 82 Savin street; 920 feet 6½x7 ft. sewer, earth and rock excavation and refilling in tunnel, \$2,950; high bid, \$46; 355 feet 6½x7 ft. sewer, earth and rock excavation, refilling in trench, \$12; high bid, \$18; 50 cubic yards brick masonry, Portland in manholes and tunnel shafts, \$18; 600 cubic yards concrete masonry, Portland in trench, \$8; high bid, \$9.50; 1,200 cubic yards concrete masonry, Portland in tunnel, \$10; high bid, \$14; 1,000 cubic yards rock excavation in trench, \$4; high bid, \$6.

Contract No. 62.—T. J. O'Connell, 158 Adams street, Dorchester; 1,664 feet 5½x6 ft. sewer, earth or rock excavation, refilling in tunnel, \$16.75; high bid, \$27; 50 cubic yards brick masonry, Portland in tunnel shafts, \$16; high bid, \$18; 2,500 cubic yards concrete masonry, Portland in tunnel, \$10; high bid, \$12; 100 cubic yards rock excavation in tunnel, \$10; high bid, \$12.

Contract No. 63.—Geo. M. Byrne Company, 7 Water street; 1,252 feet 5½x6 ft. sewer, rock excavation and refilling in trenches, \$28; high bid, \$40; 50 cubic yards rock masonry, Portland in tunnel shafts, \$16; high bid, \$20; 1,500 cubic yards concrete masonry, Portland in tunnel, \$10; high bid, \$14.

Contract No. 64.—D. F. O'Connell, 19 Ellet street; 2,300 feet 5½x9 ft. rock excavation and refilling in tunnel, \$28; high bid, \$48; 50 cubic yards brick masonry, Portland in tunnel shafts, \$20; 2,700 cubic yards concrete masonry, Portland in tunnel, \$10; high bid, \$14.

Contract No. 65.—Hugh Nawn Contracting Company; 1,650 feet 5½x6 ft. sewer, earth and rock excavation and refilling in tunnel, \$30; 50 cubic yards brick masonry, Portland in tunnel shafts, \$17; high bid, \$20; 1,900 cubic yards concrete masonry, Portland in tunnel, \$9; high bid, \$11.50.

Southbridge, Mass.—The lowest bid for constructing sewage purification works was submitted by C. E. Trumbull, of Boston, at the following bid: Grubbing, 42 cents per cubic yard; excavation, 29½ cents per cubic yard; trenching, 29½ cents per cubic yard; rock excavation, 2½ per cubic yard; for 8-inch main pipe, 30 cents per lineal foot; 10-inch, 40 cents; 12-inch, 50 cents; 18-inch, 70 cents; 20-inch, 75 cents; 4-inch distributing pipe, 30 cents per lineal foot; 6-inch, 35 cents; 8-inch, 40 cents; masonry, \$8 per cubic yard; woodwork, \$50 per thousand feet; total, \$30,582. Totals of other bids: Geo. M. Byrne Company, Boston, \$31,811; John F. Gill & Co., Somerville, \$35,689; John E. Palmer, Boston, \$38,546; Bruno & Pettitt, Boston, \$39,484; Hassam Paving Company, Worcester, \$45,935; Frank Williams, Boston, \$51,243; and Donovan & Doyle, Boston, \$71,023.

St. Louis, Mo.—The following contracts have been awarded by the Board of Public Improvements for (a) the improvement of Idaho avenue, from Loughborough street to Kansas avenue; (b) the improvement of Loughborough street, from Alabama to Colorado avenues; (c) the improvement of Columbia avenue, from Kings Highway Boulevard to Beresford avenue: (a) Ruecking Construction Company, Marine avenue and Gasconade street, \$13,693; (b) Ruecking Construction Company, \$6,284; (c) William H. Redemeyer, \$11,487.

Perth Amboy, N. J.—The Standard Bitulithic Company has been awarded contract for paving Garden avenue from Madison avenue to Second street, with bitulithic with necessary curbing; the Jersey Paving Corporation were low bidders on bids received several months ago and were awarded contract but defaulted, so the contract was awarded to the next lowest bidder.

Syracuse, N. Y.—Because of illegal form of designation of materials for the paving of Salt street and McCarthy alley and the failure to make any designation for Columbus avenue, the Board of Contract and Supply has refused to award contracts for paving those thoroughfares. Bids for Court and Grape street paving contracts were also rejected owing to a complication with the Rapid Transit Railway Company relative to paving

between the tracks. A contract for the paving of Borden avenue from South Salina street to Midland avenue with asphalt has been awarded to the Warner-Quinlan Asphalt Paving Company, at \$9,258.20. The Central City Paving Company has received contract for paving Waverly avenue from Walnut avenue to Comstock avenue with vitrified block, at a bid of \$4,688.80. A contract for the installation of electric lights in Croton School has been awarded to Albert Gaffey for \$57. Sidewalk construction contracts have been awarded as follows: Artificial Paving Company, west side of Baker avenue from No. 210 to Hunt avenue; west side of Graves street from Highland avenue to Douglas street; both sides of Winton street from Robinson street to Boyden street; both sides of May avenue from Colvin street to Eastman street; south side of Pleasant avenue from No. 121 to Cannon street and the north side from No. 114 to Cannon street. Albert Gaffey, both sides of Midland avenue from West Colvin street to the city line.

Lima, O.—Contractors Jamison & Co. are low bidders for improving N. Jefferson street by paving, at 30 cents for excavation; \$1.35 for macadam; 56 cents for stone curb; 45 cents for cement curb, and 60 cents for curb and gutter; they will probably get the contract.

Toledo, O.—The contract for paving with vitrified brick, Thayer street, from Broadway to Locust street, was awarded by the Board of Public Service to the Ohio Paving Company, at \$3,927; the same firm was awarded the contract for paving Balfe street, at \$4,440.—Frank I. Consaul, Chief Engineer.

Wapakoneta, O.—J. A. Copeland, of St. Johns, has the contract for three sewer improvements, aggregating \$5,000.

Dunmore, Pa.—O'Boyle Bros. were the only bidders for the construction of the Drinker street sewer, their bid being \$3,108.01, against the estimate of \$3,480.80. They were awarded the contract.

There were three bidders on the Chestnut street job, as follows: O'Boyle Bros., \$3,492.20; James Cullen, \$3,280; Thomas Kearney, \$3,270. The estimate for this job was \$3,889.34. As it was impossible to agree on the question of awarding this contract, it was decided to reject all bids and readvertise for new bids.

Harrisburg, Pa.—The Harrisburg Light, Heat and Power Company was low bidder for the electric lighting of the County Almshouse at 7½ cents per thousand watts on a three-year contract and 7½ cents on a one-year contract; the Paxtany Electric Company bid 8 and 8½ cents per thousand watts for the same terms of years.

Pine Grove, Pa.—All bids received by the Armory Board at Harrisburg, November 14, for constructing armory were in excess of amount available and were rejected; further consideration is being given the matter.—Benj. W. Deming, Secretary Armory Board.

Pittsburg, Pa.—P. F. Maginn & Co. have the contract for installing an electric lighting plant in the Fifth Avenue High School Building with Westinghouse generators, for \$8,800.

Polk, Pa.—All bids for remodeling the buildings of the Pennsylvania Institution for the Feeble Minded were rejected because they did not come within the appropriation of \$250,000; new estimates will be asked.

Chattanooga, Tenn.—Bids have been received for the construction of 600 feet of sidewalks on Hooke street in front of the property of the Alabama Great Southern Railroad; those bidding were Ferro Concrete Construction Company, E. P. Morris, Chattanooga Tile Company, Southern Tile Company, and the West Construction Company.

Fort Worth, Tex.—Bids for approximately three miles of street paving have been opened. The Texas Bitulithic Company entered for brick paving also, and the General Supply and Construction Company filed a double bid, presenting figures for both brick and bituminous paving. There were three competitors and the figures offered by each follow: General Supply and Construction Company: For 5-inch concrete base, 11 inches excavation, \$2.10; 55 cents per cubic yard for extra excavation. H. P. Reiter Company: Excavation, 10 inches, \$2.05. Texas Bitulithic Company: Sand filler, five-year guarantee, \$1.84; same, ten-year guarantee, \$1.94; grout filler, no guarantee, \$1.86; same, five-year guarantee, \$1.91; same, ten-year guarantee, \$2.01; asphalt filler, no guarantee, \$2.06; same with five-year guarantee, \$2.11; same, ten-year guarantee, \$2.21.

Bitulithic or bituminous pavement.—General Supply and Construction Company: Per square yard, \$2.10, with five-year guarantee; headers, 20 cents per lineal foot. Texas Bitulithic Company: Exclusive of grade, with no guarantee, \$2; exclusive of grade, five-year guarantee, \$2.10; exclusive of grade, ten-year guarantee, \$2.21.

Norfolk, Va.—Bids were opened by the Board of Control, November 18, for furnishing and installing \$50,000 worth of water

meters to be paid for in cash or in Norfolk city bonds, as follows: Buffalo Meter Company: Cash basis, ¾-inch meter, \$7.20; ½-inch meter, \$10.20; bond basis, ¾-inch meter, \$7.90; ½-inch meter, \$11.20; cash basis, ¾-inch meter and box therefor, \$16.25; ½-inch meter and box therefor, \$21; bond basis, ¾-inch meter and box, \$18.25; ½-inch meter and box, \$24. Pittsburg Meter Company offered one bid on both the cash and bond basis. It was as follows: ¾ meters, \$8.60; ¾ meters, \$12.60. Thomson Meter Company, to furnish and install meters, cash basis only, ¾ meters, \$18.75; ¾ meters, \$24. M. J. Drummond & Co., cash basis only, furnish and install ¾ meters, \$16.25; ¾ meters, Graham & Fairer, cash and bond basis, install only, \$5.80. Standard Meter Company, cash and bond basis, ¾ meters, \$8.40; ¾ meters, \$12.60. The following bid was received for the furnishing of boxes in which the meters are to be placed: C. L. Pettit: Cash basis, \$1.89. No bid on bond basis. Bids received for the furnishing and installation of boxes follow: Graham & Fairer, cash basis, \$5.80; same bid on bond basis. Thornton & Williams, cash basis, \$8.85; no bid on bond basis. G. H. Lyons, cash basis, \$5.82; no bid on bond basis. J. J. Lawler & Co., cash basis, \$7.75; no bid on bond basis. Richmond Iron Works: Furnish boxes, cash basis, \$2.15; furnish and install boxes, cash basis, \$6.60; no bid on bond basis. The bid of H. R. Worthington, not being in proper form, was not considered by the Board.

Spokane, Wash.—A. F. Gill was low bidder for constructing sewers in First Ward, No. 4, as follows: 2,820 feet 36-inch round concrete 1:24; 3-inch shell, 6 to 13-foot trench, rock, loose rock and gravel excavation, no ground water to be handled and no paving to be excavated and relaid, at \$6.55; totals: A. F. Gill, \$18,475; J. V. Costello, \$19,000; J. C. Broad, \$19,365.

John Fife was low in First Ward, No. 3; 1,700 feet 30-inch and 700 feet 24-inch vitrified pipe, 5 to 12-foot trench, solid rock and earth excavating, no ground water to be handled, at \$8.72; total: \$20,944; J. C. Broad bid \$21,065.

J. C. Broad was low in No. 7; 3,164 feet 24-inch, 8 to 10-foot trench; 2,596 feet 22-inch, 6 to 20-foot trench; 1,554 feet, 20-inch, 8 to 10-foot trench; 980 feet 18-inch, 8 to 9-foot trench; 1,052 feet, 15-inch, 8 to 10-foot trench; 2,320 feet, 12-inch, 8 to 19-foot trench; 700 feet, 8-inch, 8 to 9-foot trench, all vitrified pipe; solid rock and earth excavation, considerable ground water to be handled; no paving to be excavated and relaid, at \$7.60; total, \$93,965. J. V. Costello bid \$95,400.

John Fife was low for constructing 2,570 feet 8-inch vitrified pipe in 10 to 15-foot trench, no ground water to be handled and no paving to be excavated and relaid, in alley between Second street and railroad, at \$3.48; total, \$8,944. J. C. Broad bid \$9,365 and G. Burgie, \$9,690.

Mean of all bids: first contract, \$6.72 per foot; second, \$8.88; third, \$7.65; fourth, \$3.63; concrete manholes, \$50; rock excavation, \$6 per cubic yard; concrete flush tanks, including flushing appliance, \$120; curb inlet and catch basin, \$40; wages of common labor, \$2.75 per day.—Charles McIntyre, City Engineer.

Walla Walla, Wash.—Bids have been received for a bridge over Mill creek on Fourth street, to be 46 feet in clear, 7 feet high at center, leaving water space of 200 square feet; bidders to furnish own plans; one bid reinforced concrete girder, \$8,490, and for arch, \$9,990. In these bids for extra work, concrete in place, \$11 per cubic yard; excavation below water line, \$5 per cubic yard. A third bid for a heavier concrete arch, heavier abutments, \$12,616. In each, the roadway is to be 48 feet wide with walks 16 feet in width. Guaranteed load for roadway, 200 pounds per square foot of surface, to be tested by load of 400 pounds at time of completion; contract not let.

A contract let to Dion Keefe for 4,000 feet of retaining wall along Mill creek, composed of piling 8 feet from centers and faced with 2-inch boards to a depth of 7 feet on the river side and six boards on opposite side, piles to be driven about 8 feet.—J. B. Wilson, City Engineer.

Racine Wis.—A. C. Kappel has been awarded the contract for the erection of fire engine house No. 5 at his bid on Racine brick. The bids were: James Corse, \$17,270; A. C. Kappel, \$14,333; J. P. Jensen, \$14,585; Adam H. Marcus, \$15,442; Edgar A. Jenks, \$14,780; C. O. Johnson, \$16,830.

Spokane, Wash.—The Board of Public Works has awarded a contract to H. L. Lillenthal for grading, parking and curbing Summit boulevard and Mission avenue, from the east line of Cochran street extended to the intersection of Ide avenue at Oak street; the bid was \$21,316. Mr. Lillenthal will also build the sidewalks for \$6,644; the Engineer's estimate on the grading was \$23,757.40, and \$6,934.80 for the sidewalk.

INCORPORATIONS

Citizens' Water, Light and Power Company, Carbondale, Ill.; to operate a heat, light and power plant; capital, \$75,000. Incorporators: Charles E. Hamilton, J. S. Lewis, L. R. Harrington.

Greater Birmingham Railway Light and Power Company, Birmingham, Ala.; to build an 800-k.w. lighting plant and to supply light and power. Incorporators: J. M. Bradley and others.

Improved Electric Railway Company, Jerseyville, Ill.; to manufacture and operate electrical and other appliances; capital, \$200,000. Incorporators: Abraham A. Shobe, Sylvanus L. Hill, William Embley.

Inter-City Telephone Company, Brooklyn, N. Y.; telephone line; capital, \$250,000. Incorporators: Frederick G. Ashley, 68 St. James place; Albert W. Linton, 902 Hancock street; Thomas B. Stevenson, 26 Myrtle avenue, all of Brooklyn, and others.

Monticello Construction Company, Monticello, Ky.; to construct railroads, particularly the Cumberland River and Nashville; capital, \$100,000. Incorporators: John H. Shearer, President; W. L. Baker, Secretary; Charles McConaghy, Treasurer.

Rio De Janeiro Telephone Company, Portland, Me.; telegraph and telephone business; capital, \$1,000,000. President, J. E. Manter; Treasurer, C. E. Eaton; Clerk, M. W. Baldwin, all of Portland.

Southwestern Interurban Company, Mangum, Okla.; to build electric lines 27 miles long; capital, \$1,000,000. Incorporators: D. J. Doyle, E. E. Pinkerton and others.

Swatara Electric Light and Power Company, Annville, Pa.; capital, \$15,000. Incorporators: Annie W. Gingrich, Daniel Brandt, John Wengert, of Jonestown, and others.

Sylvester Company, New York City; general construction work; capital, \$50,000. Incorporators: H. H. Sylvester, Scituate, Mass.; H. S. de Forest, 129 West Forty-seventh street, New York; Irving F. Sylvester, Cohasset, Mass.

Tungsten Electric Lamp Company, West Fourth street, Cleveland, O.; capital, \$100,000. Incorporators: A. C. Garrison and others.

J. M. Pfandler Company, Rochester, N. Y.; to manufacture machinery and mechanical devices; capital, \$50,000. Incorporators: John M. Pfandler, William Pfandler, Joel M. Ingersoll, Rochester, N. Y.

St. Louis and Staunton Railway Company, Champaign, Ill.; to construct a railway from Edwardsville, Ill., to Staunton, Ill.; capital, not given. Incorporators: George M. Matthe, W. H. Carnahan, C. Zilly.

Transportation Equipment Company, New York City; manufacture and deal in railway supplies; capital, \$25,000. Incorporators: Henry W. Brown, 44 West Forty-fourth street; Herbert F. Adams, 418 West Twenty-seventh street; Winford J. Northup, West Thirty-sixth street; Robert C. Adams, 1133 Broadway, New York.

Woodstock, Marengo, Genoa and Sycamore Electric Railway Company, Sycamore, Ill.; to construct and operate a railway from Woodstock, Ill., to Sycamore, Ill.; capital, \$25,000. Incorporators: Charles A. Spenny, Edward B. Harang, M. W. Powell.

Civil Service Examinations

Engineer Draftsman.—The United States Civil Service Commission announces an examination, December 11-12, to fill a vacancy, in the position of engineer draftsman, at from \$1,600 to \$1,800 per annum. Apply on Form 1312.

Architectural Draftsman.—The United States Civil Service Commission announces an examination, January 8-9, to fill a vacancy in the position of architectural draftsman in the Philippine Service at Manila, at \$1,400 to \$1,600 per annum. Apply on Forms 2 and 375.

Mechanical Draftsman.—The United States Civil Service Commission announces an examination, December 11-12, to fill vacancies in the position of mechanical draftsman under the Isthmian Canal Commission on the Isthmus of Panama, at a salary of \$125 a month. Occasional appointments of persons with special qualifications are made at \$150 and \$175 a month. It is probable that about 15 appointments will be made. Apply on Form 1312.

Assistant Superintendent of Construction.—The United States Civil Service Commission announces an examination, December 11, to fill a vacancy in the position of assistant superintendent of construction, at \$1,200 per annum. Apply on Form 1312.

Topographic Draftsman.—The United States Civil Service Commission announces an examination, December 11-12, to fill vacancies in the position of topographic draftsman, Department of Construction and Engineering, Isthmus of Panama. The usual entrance salary is \$125 per month. Persons with special qualifications may receive \$150 or \$175 a month. Apply on Form 1312.